



Head Geophysics Group
Institute of Geoscience and Petroleum (IGP)
Faculty of Engineering Science
NTNU

Curriculum Vitae

Professor Suzanne A. McEnroe

Present Position: Professor, Geophysics Group Leader at IGP
Norwegian University of Science and Technology
S. P. Andersens veg 15a, 7031 Trondheim, Norway
Tel (47)-73-594806
Email: suzanne.mcenroe@ntnu.no

Academic History

1993 Ph.D. Dept. of Geosciences, University of Massachusetts, Amherst, USA
1989 M.S. Geology, Dept. of Geology and Geography, University of Massachusetts, Amherst, USA
1985 B.S. Geology, Dept. of Geology and Geography, University of Massachusetts, Amherst, USA

Employment

2018- Head of Geophysics Group, Institute of Geoscience and Petroleum NTNU
Trondheim, Norway
2017- Professor, Geophysics Group, Institute of Geoscience and Petroleum NTNU
Trondheim, Norway
2012-2016 Professor, Department of Geology and Mineral Resource Engineering NTNU
Trondheim, Norway
2009-2010 Marie Curie Senior IE Fellow, Bayerisches Forschungsinstitut für
Experimental Geochemie und Geophysik, Universität Bayreuth,
Germany
2009-2012 Professor II, Dept. of Chemistry Center for Material Science and
Nanotechnology, University of Oslo, Norway
2004- 2012 Research Professor (1183) Geological Survey of Norway,
2002- 2003 Visiting Senior Scientist, Advance Magnetism Group, Commonwealth
Scientific and Industrial Research Organization, North Ryde, Australia
1996- 2004 Senior Geophysicist, Norwegian Geological Survey, Trondheim, Norway
1995-1998 Research Assistant Professor, Dept. of Geosciences, University of
Massachusetts, Amherst, Massachusetts, USA
1994- 1995 U. S. National Science Foundation Post-doctoral Fellowship at Geological
Survey of Norway

- 1993- 1994 Adjunct Assistant Professor, Dept. of Geosciences, University of
Massachusetts, Amherst, USA
- 1993 Post-Doctoral Fellow Institute for Mineralogy and Petrology, Lund
University, Sweden.
- 1988- 1991 Teaching Assistant, Dept. of Geosciences, University of Massachusetts, USA

Science Awards – Fellowships

- 2019- American Geophysical Union Gilbert Award
- 2017- Japanese Society for the Promotion of Science (Fellowship 2017)
- 2016- Fellow of the Geological Society of America
- 2015- Fellow of the Mineralogical Society of America
- 2015- Fellow of the Norwegian Academy of Technological Sciences
- 2010- Fellow of the Royal Norwegian Society of Sciences and Letters
- 2009 The **Bullard Lecture** AGU
- 2009-2011 Marie Curie Senior IE Fellowship for Research at Bayerisches Geoinstitut
Bayreuth, Germany
- 2016 Visiting Fellowship, Institute for Rock Magnetism, Univ. of Minnesota, USA
- 2009 Visiting Fellowship, Institute for Rock Magnetism, Univ. of Minnesota, USA
- 2007 Award for Best Scientific Article at Geological Survey of Norway
- 2007 Visiting Fellowship, Institute for Rock Magnetism, Univ. of Minnesota, USA
- 2004 Visiting Fellowship, Institute for Rock Magnetism, Univ. of Minnesota, USA
- 2004 Award for Best Scientific Article at Geological Survey of Norway
- 2001 Visiting Fellowship, Institute for Rock Magnetism, Univ. of Minnesota, USA.
- 1994 National Science Foundation International Post-doctoral Fellowship.
- 1994 Visiting Fellowship, Institute for Rock Magnetism, Univ. of Minnesota, USA
- 1993 American-Scandinavian Foundation Post-doctoral Fellowship, Institute for
Mineralogy and Petrology, Lund University, Sweden.
- 1988 Geological Society of America Stearns Fellowship

Committees of Trust

- 2010-2013: Advisory Board for the Institute of Rock Magnetism, University of
Minnesota, Minneapolis, USA
- 2013-2014: Chair of Advisory Board for the Institute of Rock Magnetism, University of
Minnesota, Minneapolis, USA
- 2013-2016 Dana Medal Committee Mineralogy Society of American
- 2014-2016 Chorafas-prisen Committee NTNU
- 2014- Board Member for Center of Advanced Mineral and Ore Characterization
Trondheim, Norway
- 2015- 2020 Advisory Board Member for the National Geomagnetic Laboratory, Oslo,
University, Norway
- 2016-2020 Advisory Board Member: Deep Graduate Research School, Oslo University,
Norway

2016: Member Operational Group 5 (International Framework) European Innovation Partnership on Raw Materials

2016-2017 Norges Tekniske Vitenskapsakademi Program Committee

2018- 2020 Fleming Medal Committee American Geophysical Union

2021- President-Elect Geomagnetism, Paleomagnetism and Electromagnetism Section of the American Geophysical Union

2021-2022 Chair, GPE Fellows committee, American Geophysical Union

2021-2022 Chair, Gilbert Award Committee, American Geophysical Union

Master Students

Emilie Strømmen
Marianne Strange
Hedda Jensen
Silje Auglænd
Tord Engelhardt Andersen

PhD students

Alexander Michels
Geertje tar Maat
Zeudia Pastore
Even Nickolsen

Postdoctoral researchers

Nathan Church
Andrea Beidermann
Zeudia Pastore
Geertje tar Maat
Madeline Lee

Scientific Reviewer for Grant Proposals

Commonwealth Scientific and Industrial Research Organization; Future Science Platforms (2016), U.S. National Science Foundation; U.S. National Institute of Standards, NASA, Villum Kann Rasmussen Foundation, Humbolt Foundation, Dutch National Science Foundation, Natural Sciences and Engineering Research Council of Canada, Swiss National Science Foundation, Czech National Foundation, European Science Foundation and ERC.

Reviewer for Journals

2017: Geophysical Journal International Outstanding Reviewer; 2008-2015: Guest Associate Editor for Geochemistry, Geophysics & Geosystems: Magnetism From Atomic to Planetary Scales: Physical Principles and Interdisciplinary Applications in Geosciences and Planetary Sciences. **Reviewer for** American Mineralogist, Economic Geology, Earth and Planetary Science Letters, Geophysical Journal International, Geophysical Research Letters, Journal of Geophysical Research, Journal of Applied Physics, Nature Communications, Near Surface Geophysics, Physics of Earth and Planetary Interiors, Tectonophysics, Geochemistry, Geophysics and Geosystems, Science, PNAS.

Courses at NTNU

TGB4285	Crustal Magnetism
TGB4280	Geophysical Exploration for Natural Resources
TGB4286	Experimental methods in Petrophysics
GB 8110	Mineral and Crustal Magnetism
GB 8105	Applied Geophysics and Petrology for Exploration of Natural Resources

Invited Lectures (2001-)

Institute of Geophysics and Planetary Physics, UC San Diego 2022
Friedrich-Schiller-Universität Jena, Germany 2021
QDM Workshop, Berkeley, USA 2019
American Geophysical Union 2018
International Conference on Rock Magnetism, Utrecht, Netherlands, 2017
Kochi International Workshop on paleo-rock and environmental magnetism, Japan, 2017
Magnetism from Space to Atom, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan, 2017
Integration of Magnetism and Gravity in Northern Exploration, Arctic Days Conference, Lofoten, Norway, 2017
National Geomagnetic Laboratory, UiO, Oslo, Norway, 2016
Department of Geoscience, Aarhus University, Denmark, 2016
Institut de Physique du Globe de Paris, France, 2015
American Geophysical Union, San Francisco, USA, 2015
Geological Society of America, Vancouver, BC, Canada, 2014
Australian Earth Science Convention Newcastle, NSW, Australia, 2014
STINT Workshop on Functional Materials and Minerals, Uppsala, Sweden 2013
Department of Physics, NTNU Physics Colloquial, Trondheim, Norway, 2013
European Seminar Series in Earth Sciences, Ecole normale supérieure de Lyon, France, 2012
Geophysics Seminar, Uppsala University, Uppsala, Sweden, 2012
Kjerulf Lecture, NGU, Norway 2011
American Geophysical Union Fall Meeting, San Francisco USA, 2010
Institut für Mineralogie, Münster, Germany, 2010
Bullard Lecture, American Geophysical Union Fall Meeting, San Francisco USA, 2009
Frontiers in Earth Sciences, Ludwig-Maximilians-Universität München, Germany, 2009
University of Oslo, Center for Material Science and Nanotechnology, 2009
International Rock Magnetic Conference, Corsica, France, 2008
Geological Society of Norway, Stavanger, Norway 2007
International Union of Geodesy and Geophysics, Perugia Italy, 2007
Bavarian Research Institute of Experimental Geochemistry and Geophysics, Universität Bayreuth, Germany, EU workshop and 20th anniversary of BGI, 2006
SWARM International Workshop (ESA), Nantes, France, 2006,
Department of Geology and Geophysics, University of Minnesota, USA 2005
Department of Mineralogy, Universität Heidelberg, Germany, 2005
Department of Earth Sciences, Cambridge University, UK, 2005
American Geophysical Union Fall Meeting, San Francisco, USA, 2004

International Conference on Fine Particle Magnetism, Nanotechnology Centre
 London, UK, 2004
 32nd International Geological Congress, Florence, Italy, 2004
 Department of Physics, NTNU, Trondheim, Norway, 2004
 Department of Earth & Planetary Sciences, Macquarie University, NSW, Australia, 2003
 Department of Geology and Geophysics, Uppsala University, 2002
 Institute for Mineralogy, Münster University, Germany, 2001
 Bavarian Research Institute of Experimental Geochemistry and Geophysics, University
 Bayreuth, Germany, 2001
 Niels Bohr Institute, University of Copenhagen, Denmark, 2001

Research Grants – Fellowships-Cooperative Proposals (2001-)

AARMS Collaborative Research Group: Numerical Solution of Geophysical Inverse Problems (2021-2023) Dr. Peter Lelièvre, Dept. of Mathematics and Computer Science, Mount Allison University, Canada Suzanne McEnroe, international partner
 Multiscale Geophysics, funded by Equinor (2019-2020) Suzanne McEnroe, project leader
 Japan Society for the Promotion of Science (2017) Rock magnetic study on geological samples contributing to magnetic anomalies with magnetic microscopes, JSPS invitation Fellowship (S16128) for **Suzanne McEnroe**, Hirokuni Oda, GSJ/AIST, host.
 The Norwegian Centre for International Cooperation in Education (SIU) Green Management of Mineral Resources (GEMS) (2017-2020) Rune Berg-Edland Larsen, project Leader, **Suzanne McEnroe**, C.Barnes, C. Heatherington, M. Barnes, A. Yoshinobu partners
 NORDMIN: Platinum Probe (2014-2016) Rune Berg-Edland Larsen, project Leader, **Suzanne McEnroe**, Christian Tegner and Charles Leshar (partners).
 National Research Council of Norway: Infrastructure Program (2014-2018): Oslo Geomagnetic National Laboratory. Trond Torsvik, UiO leader, **Suzanne McEnroe**, NTNU, partner.
 EU-INT (2014-2018) ABYSS- Training Network on Reactive Geological Systems from the Mantle to the Abyssal Sub-seafloor, M. Godard, leader, **Suzanne McEnroe**, partner.
 National Research Council of Norway - Space Program (2013-2018): Sources and nature of remanent magnetization and susceptibility: Keys to interpretation of magnetic anomalies over continental lithosphere, **Suzanne McEnroe**, project leader.
 NTNU and Industrial Partners: Marine mineral resources in Norwegian waters; a survey of knowledge and research needs 11.2012-12.2013 (**McEnroe** member of consortium).
 Science and Technology Facilities Council, United Kingdom (2011) Spin orientation in natural nanoscale intergrowths and the origin of giant exchange bias. Richard Harrison and **Suzanne McEnroe** and Peter Robinson (Neutron proposal at ISIS Oxford, UK)
 Institut Laue-Langevin, France: (2011) Spin orientation in natural nanoscale intergrowths and the origin of giant exchange bias (Richard Harrison and **Suzanne McEnroe**).
 Institute of Rock Magnetism, University of Minnesota Visiting Fellowship (2009) funded by NSF: Bridging the Gap: Mineral mapping at the microscale.
 EU 7th Framework Marie Curie Senior Researcher, IE Program (2009-2011): From the Planetary to the Nanoscale: Magnetism at the Interface (**Suzanne McEnroe**). Host, Prof. Falko Langenhorst, Bavarian Research Institute of Experimental Geochemistry and Geophysics, Universität Bayreuth, Germany.

MATERA ERA-Net EU 7th Framework: Novel Nanomagnetic Oxide Composites: Giant-exchange-bias storage devices (2009-2011). **Coordinator- Suzanne McEnroe** (NGU): with Helmer Fjellvåg (UiO) and Andrew Putnis (Uni-Munster).

Norwegian Research Council-Nanomat Program: (2009-2011) Novel Nanomagnetic Oxide Composites: Giant-exchange-bias storage devices **Coordinator- Suzanne McEnroe**

Science and Technology Facilities Council, United Kingdom (Neutron beam proposal at ISIS Oxford, UK) The origin of giant magnetic exchange bias in a natural nanoscale intergrowth, Dr. Harrison (Cambridge), **Dr. Suzanne McEnroe** (NGU), Dr. Lavender (NIST), Prof. Lynn (NIST) and Prof. Robinson (NGU).

Institute of Rock Magnetism, University of Minnesota Visiting Fellowship (2007) funded by NSF: Exchange Coupling in Natural Nanoscale Materials (**Suzanne McEnroe**).

National Institute of Standards and Technology U.S.A. (2007) Magnetism of exchange bias materials: Insights through neutrons (neutron beam proposal) **S. McEnroe** in cooperation with Prof. Jeff Lynn: Center for Nanophysics and Advanced Materials at the University of Maryland and a Team leader at the National Institute of Standards and Technology (U.S.A) Center for Neutron Research.

EU Access to Infrastructures Program Universität Bayreuth, BGI, Germany and NGU Network Grant (2006-2008). Exchange bias in synthetic samples from the ilmenite-hematite solid solution: magnetic properties, exsolution and chemical ordering **Suzanne McEnroe** and K. Fabian (Drs. Tiziana Boffa-Ballaran, Nobuyoshi Miyajima and Catherine McCammon).

National Institute of Standards and Technology U.S.A. (2006) Magnetism of exchange bias materials: Insights through neutrons (neutron beam proposal) **Suzanne McEnroe** with Prof. Jeff Lynn, Center for Neutron Research.

European Science Foundation, EUROCORES Mineral Sciences Program. Magnetism and Microstructure: From the nanometre to the planetary scale (2006 to 2008). Project Leader Richard Harrison, Cambridge University with **Suzanne McEnroe**, NGU; Ulf Halenius, Uppsala, Sweden; R. Dunin-Borkowski, Cambridge University; R. Pentcheva, Munich, Germany.

Norwegian Research Council Petromaks Program and NGU (2005-2009) Developing exploration tools: Microstructural controls on magnetic minerals and magnetic anomalies on the Norwegian continental margin. **Suzanne McEnroe**, project Leader

NGU Network Grant (2005-2007) with National Institute Standards and Technology. Magnetic imaging of nanoscale exsolution and magnetic computations of the structures; Benjamin Burton, Center for Theoretical and Computational Materials Science and John Unguris, Center for Nanoscale Science and Technology (**Suzanne McEnroe**).

Norwegian Research Council Nanomat Program and NGU (2004-2006): The nature and origin of natural magnetic nanoscale materials. **Suzanne McEnroe**, project leader.

EU Access to Infrastructures Program to Bayerisches Forschungsinstitut für Experimental Geochemie und Geophysik, Universität Bayreuth, Germany (2005) Influence of pressure on the magnetic properties of the ilmenite-hematite solid solution (**Suzanne McEnroe** with Prof. Langenhorst, Dr. Heidelberg and Dr. Terry).

Institute of Rock Magnetism Visiting Fellowship – (2004) Nanomagnetism in the Hematite-Ilmenite Solid Solution (**Suzanne McEnroe**).

NGU Network Grant with Bayerisches Geoinstitut, Universität Bayreuth, Germany (Prof. Falko Langenhorst) and Cambridge University, England (Dr. Richard Harrison) Magnetic anomalies and nanoscale structures (**Suzanne McEnroe**).

NGU Network Grant (2003) with Advanced Magnetism Group, CSIRO, Sydney Australia (Dave Clark and Phil Schmidt) Magnetic anomalies and nanoscale structures: Magnetic response of ancient rocks on Earth (**Suzanne McEnroe**).

EU Access to Infrastructures Program- Bayerisches Forschungsinstitut für Experimental Geochemie und Geophysik Universität Bayreuth, Germany (Falko Langenhorst) and NGU network grant (2002-2003) **Suzanne McEnroe**, with Richard Harrison, Cambridge University; Robert Hargraves, Princeton University; Andrew Putnis, Munster University. Nanoscale interaction in the hematite-ilmenite and magnetite-ulvöspinel solid solutions with implications for planetary magnetic anomalies.

Network Grant from NGU (2001) **Suzanne McEnroe**, Peter Robinson, NGU; Richard Harrison, Cambridge University, UK; Robert Hargraves, Dept. of Geosciences, Princeton University, USA and the Magnetic Properties Team, Niels Bohr Institute, Denmark. Rock-magnetism and magnetic nanostructure of exsolved ilmenite-hematite: Development and testing of a realistic atomic hypothesis with implications for magnetic anomaly interpretation on Earth and Mars.

EU-Access to infrastructures program to Bavarian Research Institute of Experimental Geochemistry and Geophysics, Universität Bayreuth, Germany (2001) Remanence in crustal magnetism: Effects of pressure, temperature, and slow cooling on the ilmenite-hematite solid solution, and oxide exsolution in pyroxenes (**Suzanne McEnroe**).

Invited Participant to Mars Lander Workshop: Magnetic Anomalies on Mars, how can these be understood? What can we do during the 2003 Mars Exploration Missions? Niels Bohr Institute, University of Copenhagen, Denmark.

Articles in International Journals/Books **2574 citations; H-index 29; i10-index 64 (Google scholar)**

105. Lee, M., Madriz-Diaz, Y., Gloaguen, R. & S. A. McEnroe (in review) UAV UAV Magnetism over the Bjerkreim-Sokndal Intrusion, Rogaland, Norway: A first look, *Leading Edge*
104. Nickolsen, E., Fabian, K. Harrison, R.J. & S.A. McEnroe (2022) The Micromagnetic modes of anisotropy of magnetic susceptibility in natural magnetite particles, *Geophysical Research Letters*, doi: [10.1029/2022GL099758](https://doi.org/10.1029/2022GL099758)
103. McEnroe, S.A., Church, N., Fabian, K., Stange, M. F. & A. T. J. van Helvoort (2022) An Enigma in Rock Magnetism: Can Microstructures in Magnetite Cause a Threefold Increase in the Efficiency of NRM Acquisition in the Stardalur Basalts? *Geophysical Journal International*, Volume 231, Issue 2, November 2022, Pages 835–855, <https://doi.org/10.1093/gji/ggac224>
102. Pastore, Z., Lelievre, P., McEnroe, S. A., & Church, N. S. (2022) 3D Joint Inversion of Scanning Magnetic Microscopy Data. *Geophysical Research Letters*, 2022, 49(1), e2021GL096072, <https://doi.org/10.1029/2021GL096072>

101. Nickolsen, E., Fabian, K. Harrison, R.J., S.A. McEnroe, Sørensen, B. & Tegnar, C. (2022) Hysteresis parameters and magnetic anisotropy of silicate-hosted magnetite exsolutions, *Geophysical Journal International*, <https://doi.org/10.1093/gji/ggac007>
100. Robinson, P., McEnroe, S. A., Fabian, K., M. Jackson, R. Harrison & F. Heidelbach (2021) Lamellar magnetism and exchange bias in billion-year-old metamorphic titanohematite with nanoscale ilmenite exsolution lamellae: III. Atomic-magnetic basis for experimental results *Geophysical Journal International*, <https://doi.org/10.1093/gji/ggab176>.
99. Pastore, Z., McEnroe, S. A., N. Church & H. Oda (2021) Mapping and modelling mineral sources of natural remanent magnetization from the Russell Belt microcline-sillimanite gneiss, Northwest Adirondack Mountains, USA. *Geochemistry, Geophysics, Geosystems*, <https://doi.org/10.1029/2020GC009580>
98. Nickolsen, E., Harrison, R.J., Fabian, K. & S.A. McEnroe (2020) Hysteresis of natural magnetite ensembles: Micromagnetics of silicate-hosted magnetite inclusions based on focused-ion beam nanotomography, *Geochemistry, Geophysics, Geosystems*, <https://doi.org/10.1029/2020GC009389>
97. Michels, A., Fichler, C., Pastore, Z. & S.A. McEnroe (2020) Magnetic Magnetic mapping of fault zones in the Leka Ophiolite Complex, Norway. *Norwegian Journal of Geology*. <https://dx.doi.org/10.17850/njg100-1-1>
96. Brown, LL and SA McEnroe (2020) Remanent Magnetization. K. Gupta (ed.), Encyclopedia of Solid Earth Geophysics, Encyclopedia of Earth Sciences Series, Springer Nature Switzerland AG 2020: doi.org/10.1007/978-3-030-10475-7_126-1H.
95. ter Maat, G., Fabian, K, Church, N. & S. A. McEnroe (2020) Separating geometry- from stress-induced remanent magnetization in magnetite with ilmenite lamellae from the Stardalur basalts, Iceland, *Geochemistry, Geophysics, Geosystems*: doi.org/10.1029/2019GC008761.
94. Grant, T., Larsen, R., Brown, E., Müller, A. & S. A. McEnroe (2020) Mixing of heterogeneous, high-MgO, plume-derived magmas at the base of the crust in the Central Iapetus Magmatic Province (Ma 610-550): Origin of parental magmas to a global LIP event, *Lithos* doi.org/10.1016/j.lithos.2020.105535
93. Pastore, Z., H., Church, N. & S.A. McEnroe (2019) Multi-step parametric inversion of scanning magnetic microscopy data for modeling magnetization of multidomain magnetite. *Geochemistry, Geophysics, Geosystems* doi:10.1029/2019GC008542
92. ter Maat, G., McEnroe, S. A., Church, N., & R. B., Larsen (2019) Magnetic Mineralogy and Petrophysical Properties of Ultramafic Rocks - Consequences for Crustal Magnetism, *Geochemistry, Geophysics, Geosystems* doi: [10.1029/2018GC008132](https://doi.org/10.1029/2018GC008132)
91. McEnroe, S. A., Robinson, P., Church, N., & Purucker, M. (2018) Magnetism at depth: A view from an ancient continental subduction and collision zone. *Geochemistry, Geophysics, Geosystems*, 19, 1123–1147. doi.org/10.1002/2017GC007344.
90. Pastore, Z., McEnroe, S.A., ter Maat, G., Oda, H., Church, N. & P. Fumagalli (2018) Mapping magnetic sources at the millimeter to micrometer scale in dunite and serpentinite by high-resolution magnetic microscopy, *Lithos* 323, 174-190. doi.org/10.1016/j.lithos.2018.09.018.
89. Pastor, Z., Fichler, C. & S.A. McEnroe (2018) Magnetic anomalies of the mafic/ultramafic Seiland Igneous Province, *Norwegian Journal of Geology*, v.98, 79-101. [dx.doi.org/10.17850/njg98-1-06](https://doi.org/10.17850/njg98-1-06).

88. Michels, A. C., McEnroe, S.A. & C. Fichler (2018) Geophysical expression of the Leka Ophiolite, Norway modelled from integrated gravity, magnetic and petrophysical data, *Norwegian Journal of Geology*, vol. 98, 103-125. [dx.doi.org/10.17850/njg98-1-07](https://doi.org/10.17850/njg98-1-07).
87. Church, N. S. and S. A. McEnroe (2018) Magnetic field surveys of thin sections, AEGC, Sydney Australia p1-5. *Exploration Geophysics*, v. 2018 N. 1. 1st Australasian Exploration Geoscience Conference – Exploration, Innovation, Integration: doi.org/10.1071/ASEG2018abW10_3F.
86. Larsen, R. B., T. Grant, B.E. Sørensen, C. Tegner, S. McEnroe, Z. Pastore, C. Fichler, E. Nikolaisen, K. R. Grannes, N. Church, A. Michels and G.W. ter Maat (2018) Portrait of an Giant Deep-Seated Magmatic Conduit System: The Seiland Igneous Province, *Lithos*, doi:10.1016/j.lithos.2017.11.013.
85. Church, N. S. and **S. A. McEnroe** (2017) Examining origins of magnetic anomalies at the crystal scale using scanning magnetic microscopy, *Expo17 Proceedings*.
84. Beiderman, A. and **S. A. McEnroe** (2017) Effects of magnetic anisotropy on total magnetic field anomalies, *J. Geophysical Research*, doi10.1002/2017JB014647.
83. Beiderman, A., Jackson, Bilardello, D., Feinberg, J M., Brown, M. C. and **S. A. McEnroe** (2017) Influence of static alternating field demagnetization on anisotropy of magnetic susceptibility: Experiments and implications, *Geochemistry, Geophysics, Geosystems*. doi: 10.1002/2017GC007073.
82. Brok, E, Frandsen, C., Lefmann, K., **McEnroe, S.A**, Robinson, Peter, Burton, B. P., Hansen, T. and R. J.Harrison (2017) Spin orientation in solid solution hematite-ilmenite, *American Mineralogist*, 102, 1234-1243. <http://dx.doi.org/10.2138/am-2017-5792CCBY>.
81. Robinson, Peter, **McEnroe, S. A.** and M. Jackson (2017) Lamellar magnetism and exchange bias in billion-year-old metamorphic titanohematite with nanoscale ilmenite exsolution lamellae: II. Exchange-bias at 5 K after field-free cooling of NRM, *Geophysical Journal International* 208, 895–917, doi: 10.1093/gji/ggw428
80. Beiderman, A., Jackson, M., Daillio, and **S.A. McEnroe** (2017) Effect of magnetic anisotropy on the natural remanent magnetization in the MCU IVe' layer of the Bjerkreim Sokndal Layered Intrusion, Rogaland, Southern Norway, JGR, <https://doi.org/10.1002/2016JB013506>
79. Church, N., Fabian, K. and **S.A. McEnroe** (2016) Nonlinear Preisach maps: Detecting and characterizing separate remanent magnetic fractions in complex natural samples. *Journal of Geophysical Research, Solid Earth*. doi: 10.1002/2016JB013465
78. **McEnroe, S. A.**, Robinson, P., Miyajima, N., Fabian, K., Dyar, D. and E. Sklute (2016) Lamellar Magnetism and exchange bias in billion-year-old metamorphic titanohematite with nanoscale ilmenite exsolution lamellae: I. Mineral characterization and magnetic properties. *Geophysical Journal International*. doi: 10.1093/gji/ggw155
77. Pastor, Z., Fichler, C. and S.A. McEnroe (2016) The deep crustal structure of the mafic-ultramafic Sealing Igneous Province of Norway from 3D gravity modeling and geological implications, *Geophysical Journal International* 207 (3), 1653-1666. <https://doi.org/10.1046/j.1365-246X.2002.01813.x>
76. Robinson, P., **McEnroe, S.A.**, Miyajima, N., Fabian, K. and N. Church (2016) Remanent magnetization, magnetic coupling, and interface ionic configurations of intergrown

- rhombohedral and cubic Fe-Ti oxides: A short survey, *American Mineralogist*, 101 (3), 518-530 <http://dx.doi.org/10.2138/am-2016-5519>
75. Beiderman, A., Jackson, M., Daillio, and **S.A. McEnroe** (2016) Magnetic fabrics in the Bjerkreim Sokndal Layered Intrusion, Rogaland, Southern Norway, *Tectonophysics*, <http://dx.doi.org/10.1016/j.tecto.2016.09.019>
 74. Smirnov, A. V., Tarduno, J.A., Kulakov, E. V., **McEnroe, S.A.** and R. K. Bono (2016) Paleointensity, core thermal conductivity and the unknown age of the inner core, *Geophysical Journal International*, doi:10.1093/gji/ggw080.
 73. Grant, T.B., Larsen, R.B., Anker-Rasch, L., Grannes, K.R., Iljina, M., **McEnroe, S.**, Nikolaisen, E., Schanche, M., Øen, E. (2016) Anatomy of a deep crustal volcanic conduit system; the Reinfjord Ultramafic Complex, Sealing Igneous Province, northern Norway. *Lithos*, doi:10.1016/j.lithos.2016.02.020.
 72. Brown, L. L. and **S. A. McEnroe** (2015) 916 Ma Pole for southwestern Baltica: Paleomagnetism of the Bjerkreim Sokndal Layered Intrusion, Rogaland Igneous Complex, southern Norway, *Geophysical Journal International*, 203 (1): 567-587. <https://doi.org/10.1093/gji/ggv299>
 71. Fabian K., V. P. Shcherbakov, **S. A. McEnroe**, Robinson and B. Burton (2015) Magnetic mean-field modelling of solid solutions: Theoretical foundations and application to the hematite-ilmenite system. *Geophysical Journal International*, 202 (2): 1029-1040. doi: 10.1093/gji/ggv199
 70. Robinson, P., Langenhorst, F., **McEnroe, S. A.**, Fabian, K. and T. Boffa Ballaran (2014) Ferroan Geikielite and Coupled Spinel-Rutile Exsolution from Titanohematite: Interface Characterization and Magnetic Properties, *American Mineralogist*, 99, 1694-1712
 69. Robinson, P., **McEnroe S. A.**, Fabian K., Harrison, R. J., Thomas, C. I., and H. Mukai (2014) Chemical and magnetic properties of rapidly cooled metastable ferri-ilmenite solid solutions: IV. The fine structure of self-reversed thermo-remanent magnetization, *Geophysical Journal International*, doi: 10.1093/gji/ggt486
 68. Bolle, O., Bascou, J., Diot H., Charlier B. and **S. A. McEnroe** (2014) Anisotropy of magnetic susceptibility *versus* crystallographic- and shape-preferred orientation in the giant Lac Tio hemo-ilmenite ore body (Quebec Province, Canada), *Tectonophysics*, 629, 87-108. doi:10.1016/j.tecto.2014.01.012
 67. Brok, E., Sales, M., Lefmann, K., Kuhn, T.K., Schmidt, W. F., Roessli, B., Robinson, P. **McEnroe, S.A.** and R. J. Harrison (2014) Experimental evidence for lamellar magnetism in hemo-ilmenite by polarized neutron scattering, *Physical Review B*, 89, 054430.
 66. Fabian K., V. P. Shcherbakov and **S. A. McEnroe** (2013) Measuring the Curie temperature, *Geochemistry, Geophysics, Geosystems* 14, 947–961, doi: 10.1029/2012GC004440.
 65. Robinson, P., Fabian, K., **McEnroe, S. A.** and F. Heidelbach (2013) Influence of lattice-preferred orientation with respect to magnetizing field on intensity of remanent magnetization in polycrystalline hemo-ilmenite, *Geophysical Journal International*. 192, 514–536. doi: 10.1093/gji/ggs046.
 64. Robinson, P., Harrison, R. J., Fabian, K. and **S. A. McEnroe** (2012) Chemical and magnetic properties of rapidly cooled metastable ferri-ilmenite solid solutions: implications for magnetic self-reversal and exchange bias, III. Magnetic interactions

- in samples produced by Fe-Ti ordering, *Geophysical Journal International*. 10.1111/j.1365246X.2012.05692.x
63. Shcherbakov, V. P., Fabian, K., Sycheva, N. K. and **S. A. McEnroe** (2012) Size and shape dependence of the magnetic ordering temperature in nanoscale magnetic particles, *Geophysical Journal International*. doi: 10.1111/j.1365-246X.2012.05680.x.
 62. Brown, L. L. and **S. A. McEnroe** (2012) Paleomagnetism and magnetic mineralogy of Grenville metamorphic and igneous rocks of the Adirondack Highlands, USA, *Precambrian Research*, 212, 57-74, doi:10.1016/j.precamres.2012.04.012.
 61. Robinson, P., Harrison, R. H., Miyajima, N., **McEnroe, S.A.** and K. Fabian (2012) Chemical and magnetic properties of rapidly cooled metastable ferri-ilmenite solid solutions: II. Chemical changes during quenching and annealing. doi:10.1111/j.1365-246X.2011.05277.x *Geophysical Journal International*, 188, 447-472.
 60. Fabian, K., Miyajima, N., Peter Robinson, **McEnroe, S.A.**, Boffa Ballaran, T. and B. P. Burton (2011) Chemical and magnetic properties of rapidly cooled metastable ferri-ilmenite solid solutions: I. Fe-Ti order transition in quenched synthetic Ilm 61, *Geophysical Journal International*, 186, 997-1014.
 59. Fabian, K., Reimann, C., **McEnroe, S. A.**, Willemoes-Wissing, B. (2011) Magnetic properties of terrestrial moss (*Hylocomium splendens*) along a north-south profile crossing the city of Oslo, Norway, *Science of the Total Environment*, 409, 2252-2260.
 58. Brown, L. B. and **S. A. McEnroe** (2011) Remanent Magnetism in *Encyclopedia of Solid Earth Geophysics*, H. Gupta (ed) Springer-Verlag 1600p.
 57. Fabian, K., Robinson, P., **McEnroe, S. A.**, Heidelbach, F. and A. Hirt (2011) Experimental study of the magnetic signature of basal-plane anisotropy in hematite, in Petrovský et al. (eds) *The Earth's Magnetic Interior*, IAGA Special Series 1, Springer-Verlag. 280p. doi:10.1007/978-94-007-0323-0-22.
 56. Brown, L.L., **McEnroe, S.A.**, Peck, W. H. and L. P. Nilsson (2011) Anorthositic as Sources of Magnetic Anomalies, in Petrovský et al. (eds) *The Earth's Magnetic Interior*, IAGA Special Book Series 1, Springer-Verlag. doi 10.1007/978-94-007-0323-0-23.
 55. Frandsen, C, B.P. Burton, H.K. Rasmussen, **S.A. McEnroe** and S. Mørup (2010) Magnetic clusters in ilmenite-hematite solid solutions, *Physical Review B*. 81.224423. doi/10.1103/PhysRevB.81.224423.
 54. Harrison, R. H., **McEnroe, S.A.**, Robinson, P. and C. Howard (2010) Spin orientation in a natural Ti-bearing hematite: Evidence for an out-of plane component, *American Mineralogist*, 95, 974–979. doi.org/10.2138/am.2010.3402
 53. Robinson, P., K. Fabian and **S.A. McEnroe** (2010) The geometry of ionic arrangements and magnetic interactions in ordered ferri-ilmenite solid solutions and its effect on low-temperature magnetic behavior, *Geochemistry, Geophysics, Geosystems*. 11, Q05Z17 doi:10.1029/2009GC002858.
 52. Shcherbakov, V. P., Fabian, K. and **S. A. McEnroe** (2009) A mechanism of exchange bias for nanoparticles embedded in an antiferromagnetic matrix, *Physical Reviews B* 80, 174419, 1-10.
 51. McCammon, C., **McEnroe, S. A.**, P. Robinson and B. P. Burton (2009) High efficiency of natural lamellar remanent magnetisation in single grains of ilmeno-hematite calculated using Mössbauer spectroscopy, *Earth and Planetary Science Letters*, 288, 268-278. doi.org/10.1016/j.epsl.2009.09.030.

50. Hankard, F., Gattacceca J., Fermon, C., Pannetier-Lecoeur, M., Langlais, B., Quesnel, Y., Rochette, P., and **S. A., McEnroe** (2009) Magnetic field microscopy of rock samples using a Giant Magneto Resistance-based scanning magnetometer, *Geochemistry, Geophysics, Geosystems*, doi:10.1029/2009GC002750.
49. **McEnroe**, S. A., Fabian, K. Robinson, P., Giana, C. and L. L. Brown (2009) Crustal Magnetism, Lamellar Magnetism and Rocks that Remember, *Elements* (invited article) vol.5, 241-246. doi.org/10.2113/gselements.5.4.241
48. Kasama, T., R. E. Dunin-Borkowski, T. Asaka, R. J. Harrison, R.K. Chong, **S.A. McEnroe**, E.T. Simpson, Y. Matsui and A. Putnis (2009) The application of Lorentz transmission electron microscopy to the study of lamellar magnetism in hematite-ilmenite, *American Mineralogist*, 94, 262-269. <https://doi.org/10.2138/am.2009.2989>
47. **McEnroe, S.A.**, Brown, L. L. and P. Robinson (2009) Remanent and Induced Magnetic Anomalies over a Layered Intrusion: Effects from Crystal Fractionation and Recharge Events, *Tectonophysics*, 478 119–134. doi: [10.1016/j.tecto.2008.11.021](https://doi.org/10.1016/j.tecto.2008.11.021)
46. **McEnroe. S. A.**, Fabian, K., Robinson, P. and L. L. Brown (2009) Remanent magnetization in crustal rocks, *Proceedings from the 2nd International SWARM Meeting* (European Space Agency), Postdam Germany (5 p. on ESA website).
45. Geuna, S. E., **S.A. McEnroe**, P. Robinson and L. D. Escosteguy (2008) Magnetic petrology of the Devonian Achala Batholith, Argentina: titanohematite as an indicator of highly oxidized magma during crystallization, *Geophysical Journal International*, 175, 925-941.
44. Brown, L. L. and **S.A. McEnroe** (2008) Magnetic properties of Anorthosites: A forgotten source for planetary magnetic anomalies? *Geophysical Research Letters* 35, L02305, doi:10.1029/2007GL032522.
43. Fabian, K., **McEnroe, S. A.**, Robinson, P. and V. P. Shcherbakov (2008) Exchange bias identifies lamellar magnetism as the origin of the natural remanent magnetization in ilmeno-hematite from Modum, Norway, *Earth Planet. Science Letters*, doi:10.1016/j.epsl.2008.01.034.
42. Burton, B. P., Robinson, P., **McEnroe, S. A.**, Fabian, K. and T. Boffa Ballaran (2008) A Low-Temperature phase diagram for ilmenite-rich compositions in the system Fe₂O₃-FeTiO₃ *American Mineralogist*, 1260– 1272. <https://doi.org/10.2138/am.2008.2690>
- McEnroe, S.A.**, Carter-Stiglitz, B., Harrison, R. H. Robinson, P. Fabian, K. and C. McCammon (2007) Correction to Magnetic exchange bias of more than 1 Tesla in a natural mineral intergrowth, *Nature Nanotechnology*, doi:10.1038/nnano.2007.436, **Corrigendum**.
41. **McEnroe, S. A.**, Carter-Stiglitz, B., Harrison, R. H. Robinson, P. Fabian, K. and C. McCammon, (2007) Magnetic exchange bias of more than 1 Tesla in a natural mineral intergrowth, *Nature Nanotechnology*, 2, 631 - 634 (2007) doi:10.1038/nnano.2007.292
40. Schmidt, P. W., **McEnroe, S. A.**, Clark, D. A. and Peter Robinson (2007) Magnetic properties and potential field modeling of the Peculiar Knob metamorphosed iron formation, South Australia: an analog for the source of the intense Martian magnetic anomalies? *Journal of Geophysical Research*, 112, B03102, doi: 10.1029/2006JB004495.
39. **McEnroe, S. A.**, Robinson, P. Langenhorst, F. Frandsen, C., Terry, M. P. and T. Boffa Ballaran (2007) Magnetization of exsolution intergrowths of hematite and ilmenite:

- Mineral chemistry, phase relations, and magnetic properties of hemo-ilmenite ores with micron- to nanometer-scale lamellae from Allard Lake, Quebec, *Journal of Geophysical Research*, 112, B10103, doi:10.1029/2007JB004973.
38. Harrison, R. H., **McEnroe, S. A.**, Robinson, P., Palin, E. J., and T. Kasama (2007) The mechanism of giant exchange bias (>1 T) in a natural intergrowth of Fe_2O_3 - FeTiO_3 . *Physical Review B* 76, 174436_1-10.
 - Frandsen, C., S. Mørup, **S. A. McEnroe**, P. Robinson, and F. Langenhorst (2007) **Correction to** "Magnetic phases in hemo-ilmenite: Insight from low-velocity and high-field Mössbauer spectroscopy", *Geophysical Research Letters* 34, L09317, doi: 10.1029/2007GL030387.
 37. Frandsen, C., S. Morup, **S. A. McEnroe**, P. Robinson, and F. Langenhorst (2007) Magnetic phases in hemo-ilmenite: Insight from low-velocity and high-field Mossbauer spectroscopy, *Geophysical Research Letters* doi:10.1029/2006GL029063.
 35. Hirt, Ann M.; Schmidt, Volkmar; **McEnroe, Suzanne**; Heidelbach, Florian; Robinson, Peter, (2006) Magnetic fabric in ilmenite rich norites of the Bjerkreimer-Sokndal Layered Intrusion, Norway. In: Philipp, S.; Leiss, B; Vollbrecht, A.; Tanner, D.; Gudmundsson, A. (eds.): 11. Symposium "Tektonik, Struktur- und Kristallingeologie"; 2006, Univ.-Verl. Göttingen, S. 91 - 93., DOI <https://doi.org/10.23689/fidgeo-1831>.
 34. **McEnroe, S. A.**, K. Hemant and J. R. Skilbrei, (2006) Magnetic contributions of minerals at the surface and at depth in the crust: comparing anomaly maps from aeromagnetic and satellite data from Scandinavia, *Proceeding from 1st International SWARM Meeting*, 3-5 May, 2006 Nantes, France. ESA WPP-261 European Space Agency Publications, Noordwijk.
 33. Robinson, P., Harrison R. J. and **S. A. McEnroe** (2006) Fe^{2+} / Fe^{3+} charge ordering in contact layers of lamellar magnetism: bond valence arguments, *American Mineralogist* 91, 67-72. <https://doi.org/10.2138/am.2006.2012>
 - Robinson, P., Heidelbach, F., Hirt, A. M., **McEnroe, S. A.** and L. L. Brown (2006) Correction Crystallographic-magnetic correlations in single crystal haemo-ilmenite: New evidence for lamellar magnetism, *Geophysical Journal International*. **165**, 431 doi: 10.1111/j.1365-246X.2006.02999.
 32. Robinson, P., Heidelbach, F., Hirt, A. M., **McEnroe, S. A.** and L. L. Brown (2006) Crystallographic-magnetic correlations in single crystal haemo-ilmenite: New evidence for lamellar magnetism, *Geophysical Journal International*, 165, 17-31. <https://doi.org/10.1111/j.1365-246X.2006.02999.x>
 31. **McEnroe, S. A.**, Harrison R. J., Jackson M., Hirt, A. M., Robinson P., Langenhorst, F., Kasama, T., Putnis, A., Brown L. L. and U. Golla-Schindler (2005) Lamellar magnetism: Effects of interface versus exchange interactions of nanoscale exsolutions in the ilmenite-hematite system, International Conference on Fine Particle Magnetism Proceedings, *Journal of Physics: Conference Series*, 17, 154-167.
 30. Hounslow, M., **McEnroe, S. A.**, Hirt, A. M. and T. Evans (2004) Multidisciplinary applications of nanoscale magnetic behavior, particulates, and structures, *EOS, Transactions, American Geophysical Union*, 85, 555-556.

29. **McEnroe, S. A.**, Brown L. L. and Robinson, Peter (2004) Earth analog for Martian magnetic anomalies: Remanence properties of hemo-ilmenite norites in the Bjerkreim-Sokndal Intrusion, Rogaland, Norway, *Journal of Applied Geophysics*, 56/3 195-212.
28. **McEnroe, S. A.** Langenhorst, F., Robinson P., Bromiley G. and C. Shaw (2004) What is magnetic in the lower Crust? *Earth and Planetary Science Letters* 226, 175-192.
27. **McEnroe, S. A.**, J. R. Skilbrei, P. Robinson, F. Heidelbach, F. Langenhorst, and L. L. Brown (2004) Magnetic anomalies, layered intrusions and Mars, *Geophysical Research Letters*, 31, L19601, doi:10.1029/2004GL020640.
26. Brown, L.L. and **S. A. McEnroe** (2004) Paleomagnetism of the Egersund-Ogna Anorthosite, Rogaland, Norway, and the position of Fennoscandia in the Tonian, Neoproterozoic, *Geophysical Journal International*, 158, 479-488.
25. Dyar, D. M., **McEnroe, S. A.**, Murad E., Brown, L. L. and H. Schiellerup (2004) The relationship between exsolution and magnetic properties in hemo-ilmenite: Insights from Mössbauer spectroscopy, *Geophysical Research Letters*, 31, 4, L04608. doi: 10.1029/2003GL019076.
24. Frandsen, C., Stipp, S.L.S., **McEnroe, S.A.**, Madsen, M.B. and J.M. Knudsen (2004) Magnetic force microscopy (MFM) reveals magnetic domain structure and stray field of individual elongated magnetite grains. *Physics of Earth and Planetary Interiors*, 141, 121-124. doi.org/10.1016/j.pepi.2003.12.001
23. Kasama, T., **McEnroe, S.A.**, Ozaki, N., Kogure, T. and A. Putnis (2004) Effects of nanoscale exsolution in hematite-ilmenite on the acquisition of stable natural remanent magnetization. *Earth and Planetary Science Letters*, 224, 461-475. <https://doi.org/10.1016/j.epsl.2004.05.027>
22. Robinson, P., Harrison, R. J., **McEnroe, S. A.** and R. Hargraves (2004) Nature and origin of lamellar magnetism in the hematite-ilmenite series. *American Mineralogist*, 89, 725-747.
21. Smethurst, M. A. and **S. A. McEnroe** (2003) The palaeolatitude controversy in the Silurian of Newfoundland resolved: new palaeomagnetic results from the central mobile belt, *Tectonophysics*. 362, 83-104.
20. Brown, L. L., **McEnroe S. A.** and M. Smethurst (2003) Tectonic setting of the Egersund-Ogna anorthosite, Rogaland, Norway, and the position of Fennoscandia in the Late Proterozoic, in *J-C Duchesne and A. Korneliussen*, editors, Ilmenite deposits and their geological environments, *Norwegian Geological Survey Bulletin, Special Publication*, 9.
19. Robinson P, Kullerud K, Tegner C., Robins B. and **S. A. McEnroe** (2003) Could the Tellnes ilmenite deposit have been produced by in-situ magma mixing? in *J-C Duchesne and A. Korneliussen*, editors, Ilmenite deposits and their geological environments, *Norwegian Geological Survey Bulletin, Special Publication*, 9, 74-76.
18. **McEnroe, S. A.**, Harrison, R. J., Robinson Peter and F. Langenhorst (2002) Nanoscale haematite-ilmenite lamellae in massive ilmenite rock: an example of lamellar magnetism' with implications for planetary magnetic anomalies. *Geophysical Journal International* 151, 890-912. <https://doi.org/10.1046/j.1365-246X.2002.01813.x>

17. **McEnroe, S. A.**, Dyar, M. D. and L. L. Brown (2002) Magnetic signatures on planets without magnetic fields. *Lunar and Planetary Science Proceedings*, XXXIII, 1287-1288.
16. Mørk, M.E., **McEnroe, S. A.** and O. Olesen (2002) Magnetic susceptibility of Mesozoic sediments off Mid Norway and the role of siderite: Implications for interpretation of high resolution aeromagnetic anomalies. *Journal Marine and Petroleum Geology*, 19, 115-126.
15. Robinson, P., Harrison, R. J., **McEnroe, S. A.** and R. Hargraves (2002) Lamellar magnetism in the hematite-ilmenite series as an explanation for strong remanent magnetization, *Nature*, 418, 517-520.
14. Robinson, P., Panish, P. T. and **S. A. McEnroe** (2002) Errata and comment: Minor element chemistry of hemo-ilmenite- and magnetite-rich cumulates from the Sokndal Region, South Rogaland, Norway, *American Mineralogist*, 87, 372.
13. **McEnroe, S. A.**, Robinson, P. and P. Panish (2001) Aeromagnetic anomalies, magnetic petrology and rock magnetism of hemo-ilmenite- and magnetite-rich cumulates from the Sokndal Region, South Rogaland, Norway, *American Mineralogist*, 86, 1447-1468. doi.org/10.2138/am-2001-11-1213
12. Robinson, P., Panish, P. and **S. A. McEnroe** (2001) Minor element chemistry of hemo-ilmenite- and magnetite-rich cumulates from the Sokndal Region, South Rogaland, Norway, *American Mineralogist*, 86, 1469-1476.
11. **McEnroe, S. A.**, Harrison, R., Robinson, P. Golla, U. and M. J. Jercinovic (2001) The effect of fine-scale microstructures in titanohematite on the acquisition and stability of natural remanent magnetization in granulite facies metamorphic rocks from southwest Sweden: Implications for crustal magnetism, *Journal of Geophysical Research*, 106, 30523-30546. doi.org/10.1029/2001JB000180
10. **McEnroe, S. A.**, and L.L. Brown (2000) A closer look at remanence-dominated anomalies: Rock-magnetic properties and magnetic mineralogy of the Russell Belt microcline-sillimanite gneisses, Northwest Adirondacks Mountains, New York. *Journal of Geophysical Research*, 105, 16,437-16,456. <https://doi.org/10.1029/2000JB900051>
9. **McEnroe, S. A.**, and Brown, L.L. (2000) Jurassic paleomagnetism: A view from New England, USA. *Geophysical Journal International*, 143, 22-38.
8. **McEnroe, S. A.**, Robinson, P. and P. Panish, (2000) Chemical and petrographic characterization of ilmenite-and magnetic-rich cumulates of the Sokndal region, Rogaland, Norway. *Norwegian Geological Survey Bulletin*, 436, 49-56.
7. Korneliussen, A., **McEnroe, S. A.**, Nilsson, L. P., Schiellerup, H., Gautneb, Meyer, G. B. and R. H. Størseth (2000). An overview of titanium deposits in Norway, *Norwegian Geological Survey Bulletin*, 436, 27-38.
6. Korneliussen, A., Nilsson, L. P., Schiellerup, H., Gautneb and **S. A. McEnroe** (1999) Titanium deposits in Norway, in Stanley et al., editors, *Mineral Deposits: Processes to Processing*, Rotterdam, 1137-1140.
5. Harrison. R. J., Golla, U., **McEnroe, S.** and A. Putnis (1998) The effect of ultra-fine exsolution lamellae on magnetic properties of the ilmenite-hematite solid solution: Microstructural and chemical investigation using energy filtered TEM. *Electron Microscopy*, 1, 233-234.

4. **McEnroe, S. A.** (1997) Ilmenite mineral magnetism: Implications for geophysical exploration for ilmenite deposits. Proceedings from Research in Progress at NGU. *Norwegian Geological Survey Bulletin* 433, 36-37.
3. **McEnroe, S. A.** (1996) North America during the lower Cretaceous: new paleomagnetic constraints from intrusions in New England. *Geophysical Journal International*, 126, 477-494. <https://doi.org/10.1111/j.1365-246X.1996.tb05304.x>
2. **McEnroe, S. A.** (1996) A Barremian - Aptian (Early Cretaceous) paleomagnetic reference pole for North America. *Journal of Geophysical Research*, 101, 15,819-15,835.
1. **McEnroe, S. A.** (1995) Paleomagnetic evidence for a late Triassic age for transitional to alkalic diabase dikes from central Rhode Island. *American Journal of Science*, 295, 98-123. doi:10.2475/ajs.295.1.98

Professional Reports

- Korneliussen, A., Gautneb, Nilsson, L. P., Furuhaug, L., Sørdal, T. and **McEnroe, S. A.** (2001) Forekomster med ilmenitt, vanadiumhokdig magnetitt og apatitt i norittiske bergarter i Egersundfeltet, Rogaland, *Geological Survey of Norway Report* 2001.014.
- Marker, M., Bingen, B. Erichsen, E., Gautneb, H., Heldal, T. Ihlen, P.M., Korneliussen, A. Larsen, R.B., **McEnroe, S.A.**, Meyer, G.B., Sandstad, J.S., Sørdal, T., Tegner, C.& J.E. Wanvik (2000) Geologiske undersøkelser innenfor Rogalandsprogrammet *Geological Survey of Norway Report* 2000.140.
- McEnroe, S. A.** (1998) Magnetic susceptibility measurements of offshore carbonate samples, *Geological Survey of Norway Report* 98.086.
- McEnroe, S. A.** (1998) Magnetic susceptibility measurements on concrete samples. *Geological Survey of Norway Report* 98.122.
- Mørk, M.E., **McEnroe, S. A.** and O. Olesen (1998) Magnetic properties of sedimentary rocks cores from the northern North Sea, measurements and interpretation, *Geological Survey of Norway Report* 98.005.
- McEnroe, S. A.** (1997) Magnetic mineralogy and related rock-magnetic properties of selected sedimentary and igneous samples: Implications for aeromagnetic interpretation in regions of hydrocarbon migration, *Geological Survey of Norway Report* 97.177.
- Mørk, M.E., **McEnroe, S. A.**, and Olesen, O. (1997) OSRAM - Origin of sediment related aeromagnetism, Magnetic properties of Mesozoic and Cenozoic sediments the Northern North Sea and Norwegian Sea: measurements and interpretation revised version for Neste Petroleum, IKU Report 23.2570.00/02/97.
- Nordgulen, Ø., Paget, P., Robinson, P. and **McEnroe, S. A.** (1997) COPENA conference at NGU. August 18-22, 1997: Abstracts and Proceedings, *Geological Survey of Norway Report* 97.131.
- McEnroe, S. A.**, Robinson, Peter and P.T. Panish (1996) Rock magnetic properties, oxide mineralogy, and mineral chemistry in relation to aeromagnetic interpretation and search for ilmenite reserves, *Geological Survey of Norway Report* 96.060.
- Karlsen, T. A., Schiellerup, H., **McEnroe, S.**, Nilsson, L. P. and Korneliussen, A. (1996) Current Research on ilmenite in the Egersund Province, *Geological Survey of Norway Report* 96.059.
- Mørk, M.E., **McEnroe, S. A.**, and Olesen, O. (1996) OSRAM - Origin of

- sediment related aeromagnetics, Magnetic properties of Mesozoic and Cenozoic sediments the Northern North Sea and Norwegian Sea: measurements and interpretation. IKU Report 23.2570.00/01/96.
- Skilbrei, Jan Reidar, Sindre, Atle, **McEnroe, S. A.**, Robinson, Peter, and Kihle, O. (1995) Combined interpretation of potential-field, petrophysical data and topography from Central Norway and the continental shelf between 62°N and 65°N, with a preliminary report on the paleomagnetic dating of faults near Molde, *Geological Survey of Norway Report* 95.027.
- Robinson P., Kullerud K., Tegner C, Robins B. and **McEnroe, S. A.** (2001) Could the Tellnes ilmenite deposit have been produced by in-situ magma mixing? in Korneliussen, A. (ed.), *GEODE field workshop on ilmenite deposits in the Rogaland anorthosite province, S. Norway. Geological Survey of Norway Report* 2001.042, 119-125.
- Schmidt, P., McEnroe, S. A., Robinson, P., Fabian, K., Gattacceca, J., Hankard F. and Florian Heidelberg (2010) Magnetic moments of fine particles from micromagnetic surveys, ASEG Extended Abstracts 2010 doi:10.1071/ASEG2010ab127 (Best poster award)
- Fabian, K. and **McEnroe, S. A.** (2010) 12th Castle Meeting on Paleo, Rock and Environmental Magnetism, Nove Hrad, Czech Republic, *The IRM Quarterly*, 20, 3, 2-3.
- Fabian, K., Robinson, P., **McEnroe, S. A.** and F. Heidelberg (2009) The magnetic signature of basal plane anisotropy in hematite *Bayerisches Geoinstitut Jahresbericht*, 111-114, *Universität Bayreuth, Germany*.
- Fabian, K., **McEnroe, S. A.**, Robinson, P. Miyajima, N., Burton, B. P. and T. Boffa Ballaran (2008) Fe-Ti order transition in quenched synthetic ilm 60: magnetic properties and high-resolution TEM, Annual Report, *Bayerisches Geoinstitut, Universität Bayreuth, Germany*.
- McEnroe, S. A.**, Robinson, P., Miyajima, F. Langenhorst and M. Terry (2008) Comparative TEM study of exsolution lamellae in hemo-ilmenite in igneous rock emplaced at 5 kbar and gabbro rapidly uplifted after eclogite facies metamorphism key to contrasting magnetizations. Annual Report, *Bayerisches Geoinstitut, Universität Bayreuth, Germany*.
- McEnroe, S. A.**, Miyajima, N. Robinson, P. Fabian, K. Burton, B. P. and T. Boffa Ballaran (2007) Cryptic intergrowth of magnetite-like phase in synthetic titanohematite, Annual Report, *Bayerisches Geoinstitut, Universität Bayreuth, Germany*.
- Fabian, K., **McEnroe, S. A.** and Robinson (2008) Paths through the Exchange jungle, *The IRM Quarterly*, 17, 11-13.
- McEnroe S.A.**, Boffa Ballaran, T., Robinson, P. and B. P. Burton (2007) High-resolution X-ray diffraction study of synthetic hematite-ilmenite solid solutions for confirmation of phase composition and detection of impurities Annual Report, *Bayerisches Geoinstitut, Universität Bayreuth, Germany*.
- Robinson, P. Langenhorst, F., **McEnroe, S. A.**, Fabian, K., Jercinovic, M. J. and T. Boffa Ballaran (2007) Geikielite and coupled spinel-rutile exsolution from coarse-grained titanohematite found in Mesoproterozoic granulite-facies rocks, south Norway, Annual Report, *Bayerisches Geoinstitut, Universität Bayreuth, Germany*.
- McCammon, C. A., **McEnroe, S.A.** and P. Robinson (2006) The nature of iron in contact layers hematite-ilmenite: New insights into lamellar magnetism. *Annual Report, Bayerisches Geoinstitut, Universität Bayreuth, Germany*.
- McEnroe, S. A.**, Robinson, P., Heidelberg, F. and A. M. Hirt (2006) Combined crystallographic, magnetic, and polishing techniques prepares natural hemo-ilmenite for

- magnetic experiment. *Annual Report 2005, Bayerisches Geoinstitut, Universität Bayreuth, Germany.*
- McEnroe, S. A.,** Harrison, R. J., Robinson, Peter, Langenhorst, F., Kasama, T., Putnis, Andrew, Jackson, M., Hirt, A. and L. Brown, (2004) Lamellar magnetism: effects of interface versus exchange interactions in the ilmenite-hematite system, *International Conference on Fine particle magnetism, London Center for Nanotechnology, Conference Guide, p. 4-5, UCL, London.*
- Harrison, R. J., Dunin-Borkowski, R. E., Simpson, E. T., Kasama, T., **McEnroe, S. A.** (2004), Lamellar magnetism associated with nanoscale exsolution in the ilmenite-hematite solid solution, *International Conference on Fine particle magnetism, London Center for Nanotechnology, Conference Guide, p. 34-35, UCL, London.*
- McEnroe, S. A.** and Brown, L.L. (2003) Rock-magnetism and magnetic nanostructure of exsolved ilmenite-hematite: Developing and testing a realistic atomic hypothesis with implications for magnetic anomaly interpretation on Earth and Mars, *The IRM Quarterly, 13, 2-3.*
- Robinson, P., Heidelbach, F., **McEnroe, S. A.,** Brown, L. L. and Harrison R. (2003) A fundamental problem of lamellar magnetism in the ilmenite-hematite series, *Bayerisches Forschungsinstitut für Experimental Geochemie und Geophysik Universität Bayreuth Annual Report, 3.2-3.3.*
- McEnroe, S.A.,** Robinson, P., Langenhorst, F. and Bromiley, G. (2002) Micrometer- and nanometer-scale mineral chemistry of hemo-ilmenite in relation to magnetism, *in Bayerisches Forschungsinstitut für Experimental Geochemie und Geophysik Universität Bayreuth Annual Report.*
- McEnroe, S.A.,** Robinson, P., Langenhorst F. and F. Heidelbach (2002) Magnetic remanence, oxide-silicate mineralogy, and lattice-preferred orientation in ilmenite norite of the Heskestad anomaly, Bjerkreim-Sokndal layered intrusion, Rogaland, Norway *in Bayerisches Forschungsinstitut für Experimental Geochemie und Geophysik Universität Bayreuth Annual Report.*
- McEnroe, S.,** P. Robinson, S. Shaw, G. Bromiley and F. Langenhorst (2001) A high-temperature experimental approach to interpretation of crustal magnetism in the hematite-ilmenite system, *Bayerisches Forschungsinstitut für Experimental Geochemie und Geophysik Universität Bayreuth Annual Report, in Physical properties of rocks and minerals.*
- McEnroe, S. A.,** Robinson, P., Langenhorst, F. and G. Shaw (2001) Oriented blades and rods of ilmenite-hematite in pyroxenes: a possible source for strong remanent magnetization and an Earth analog for planetary magnetic anomalies, *Bayerisches Forschungsinstitut für Experimental Geochemie und Geophysik Universität Bayreuth, Annual Report, in Physical properties of rocks and minerals.*
- McEnroe, S. A.,** and Brown, L.L. (2000) Rock-magnetic studies in support of aeromagnetic anomaly interpretation, *The IRM Quarterly, 10, 6-7.*
- McEnroe, S. A.,** (1994) Magnetic properties of intrusive igneous rocks from New England, *The IRM Quarterly, v. 3, 5.*
- McEnroe, S.A.** and L.L. Brown (1992) Mesozoic paleomagnetism and diabase petrography and geochemistry in central Massachusetts, *in Robinson, Peter and Brady, J.B., Editors, Guidebook for Field Trips to the Connecticut Valley Region of Massachusetts and*

Adjacent States. New England Intercollegiate Geological Conference, 84th Annual Meeting, Amherst, Massachusetts, 358-379.

Robinson, Peter, Huntington, J. C., **McEnroe, S. A.** and G. E. Springston (1988) Root zone of the Bernardston Nappe and the Brennan Hill thrust involuted by backfolds and gneiss domes in the Mount Grace area, north-central Massachusetts. *in Guidebook, New England Intercollegiate Geological Conference, 80th Annual Meeting*, Keene, N. H., 293-334.

MSc. Thesis

McEnroe, Suzanne A. (1989) Paleomagnetism and geochemistry of Mesozoic diabase dikes in west-central Massachusetts. Contribution No. 64, Department of Geology and Geography, University of Massachusetts, Amherst, 136 p.

Ph.D. Thesis

McEnroe, Suzanne A. (1993) Paleomagnetism of Mesozoic intrusions in New England; Implications for the North American apparent polar wander path Department of Geology and Geography, University of Massachusetts, Amherst, 237 p.

Abstracts and Presentations

Lee, et al., Magnetic Modelling of the Bjerkreim-Sokndal Intrusion, Southern Norway (2022) AGU Fall meeting Chicago, USA

Béguin, A., Fabian, K., Church, N., and S. McEnroe (2022) Determining Demagnetization Energy and Internal Stress in Natural Magnetite Bearing Samples, EGU General Assembly Vienna, Austria, 23–27 May. <https://doi.org/10.5194/egusphere-egu22-12541>, 2022.

Nikolaisen, E. S., Harrison, R. J., Fabian, K., and S. A. McEnroe (2022) Anisotropy of magnetic susceptibility and hysteresis parameters for natural magnetite particle assemblages: Micromagnetic analysis of focused-ion-beam nanotomography data with MERRILL, EGU General Assembly, Vienna, Austria, 23–27 May 2022, <https://doi.org/10.5194/egusphere-egu22-8528>, 2022.

Lelièvre, P. et al. (2021) Constrained Magnetic Vector Inversion of Scanning Magnetic Microscopy Data for Modelling Magnetization of Multidomain Mineral Grains EGU21-3466

Harrison, RJ, Robinson, Peter, McEnroe, S.A., Fabian, K., Heildleback, F. and M. Jackson (2020) Adventures at the nanoscale: lamellar magnetism and exchange bias in billion-year-old metamorphic titanohematite, GSA Oregon, USA,

McEnroe, S. A., Pastore, Z., Church, N., Langenhorst, F. & H. Oda (2020) Mineral sources of magnetic anomalies: Insights from scanning magnetic microscopy, EGU General Assembly, Vienna, Austria 03-8.05.2020

Pastore, Z. & S. A. McEnroe EGU General Assembly, Vienna, Austria 03-8.05.2020

Maat McEnroe, S., Church, N. and H. Oda (2020) Magnetization of lower crustal rocks - potential sources of long wavelength anomalies EGU General Assembly, Vienna, Austria 03-8.05.2020

Nikolaisen, E., EGU General Assembly, Vienna, Austria 03-8.05.2020

Purucker, M., E., Ravat, D., X Langlais, B., Michels, A., Connerney, J. & S. McEnroe (2020) Interpretation techniques for crustal magnetic fields in the presence of solar fields, instrument or mission challenges, JpGU-AGU Chiba, Japan

- McEnroe, S. A. (2019) Minerals and Magnetic Anomalies on the Mineral, Local, Regional and Satellite Scales, Magnetic Imaging Workshop, 07-08.12.2019, Berkeley, CA, USA.
- Brown, LL, McEnroe, S.A. & Pastore, Z. (2019) Remanent-Controlled Negative Magnetic Anomaly Associated with the Garsaknatt Intrusion, Rogaland Igneous Complex, Norway. AGU Fall meeting San Fransisco, USA.
- McEnroe, S. A., Brown, L., Pastore, Z., ter Maat, G., & A. C. Michels (2019) A Palaeoproterozoic metamorphic amphibolite to granulite facies transition in Vesteralen, northern Norway, or a tectonic boundary? Insights from magnetic data. AGU Fall meeting San Fransisco, USA, 2019.
- Pastore, Z., Church, N. & S. A. McEnroe (2019) What can we learn from magnetic anomalies on the micrometer-scale? Challenges and implications for crustal anomalies from scanning magnetic microscopy. AGU Fall meeting San Fransisco, USA, 09-12.12.2019.
- Pastore, Z., Church, N., ter Maat, G., Michels, A. C., Fichler, C., Larsen, R. & S. A. McEnroe (2019) The internal architecture of the Rein fjord ultramafic complex from high resolution magnetic, gravity and petrophysical data. AGU Fall meeting San Fransisco, USA, 09-12.12.2019.
- McEnroe, S.A., Robinson, P., Pastore, Z., Church, N., & F. Langenhorst (2019) Mapping remanent sources from the kilometer to the micron scale. Eleventh Santa Fe Conference on Rock Magnetism; 2019-06-06 - 2019-06-09.
- ter Maat, G., S.A. McEnroe, C. Church, Z. Pastore (2019) Sources of magnetization in lower crustal ultramafic rocks. AGU Fall Meeting, San Fransisco, USA, 09-12.12.2019.
- ter Maat, G., Fabian, K., McEnroe, S. A. & N. Church (2019) How microstructures control remanent magnetization: Micromagnetic models and bulk measurements of exsolved magnetite in basalts of the Stardalur volcano, Iceland. AGU Fall meeting San Fransisco, USA, 09-12.12.2019.
- Church, N., McEnroe, S.A., & C. Tegner (2019) FORC principal component analysis of coarse-grained samples: whole rock and mineral separates from the Bushveld Complex, South Africa. AGU Fall meeting San Fransisco, USA, 09-12.12.2019.
- Pastore, Z., McEnroe (2019) 3D Modeling of high-resolution magnetic microscopy data of a serpentine-magnesite sample from Modum, southern Norway. EGU General Assembly, Vienna, Austria 07-12.04.2019
- Pastore, Z., Church, N. & McEnroe, Suzanne (2019) Modeling multidomain magnetization in magnetite by high resolution scanning magnetic microscopy. Eleventh Santa Fe Conference on Rock Magnetism; 2019-06-06 - 2019-06-09
- McEnroe, S. A., & P. Robinson (2018) The role of atomic-scale properties on magnetic anomalies on local, regional and satellite scales, American Geophysical Union, Washington DC, USA 10-14.12.2018 **(invited)**
- ter Maat, G., S.A. McEnroe, C. Church, Z. Pastore and R. Larsen (2018) Sources of Magnetization in the Lower Crust, an Example from the Rein fjord Ultramafic Complex, Seiland Igneous Province, Northern Norway, American Geophysical Union, Washington DC, USA 10-14.12.2018
- Brown, LL, McEnroe, S. A., & P. Robinson The Last Gasp of the Rogaland Igneous Province, Norway: A Paleopole for the 920 Ma Tellnes Intrusion, American Geophysical Union, Washington DC, USA 10-14.12.2018
- Michels, A. S. A. McEnroe and C. Fichler (2018) American Geophysical Union, Washington DC, USA 10-14.12.2018

- Pastore, Z., McEnroe, S. A., Fichler, C., ter Maat, G., Church, N. Michels, A., Oda H., Larsen, R.(2018) 3D modeling of magnetic anomalies from kilometer to micrometer scale, American Geophysical Union, Washington DC, USA 10-14.12.2018
- McEnroe, S., Robinson, P., Pastore, Z., Church, N., ter Maat, G., Michels, A., Biedermann, A., Langenhorst, F.; Brown, L. L.; Heidelberg, F. Mapping Remanent and Induced Magnetic Sources from the Km to Micron-scale, American Geophysical Union, Washington DC, USA 10-14.12.2018
- Pastore, Z.. McEnroe, S. A. Fichler, C., Church, N.. ter Maat, G., Oda, H. & R. Larsen (2018) 3D Modeling of Multiscale Magnetic Anomalies, XIXth IAGA Workshop on Geomagnetic Observatory Instruments, Data Acquisition and Processing Conrad Observatory, Austria, 24-29.06.2018.
- McEnroe, S. A., Robinson, P., Church, N. Pastore, Z., Michels, A., ter Maat, G. and F. Langenhorst, Heidelberg, F. & L. Brown (2018) Sources of remanent and induced magnetization in the Bjerkreim–Sokndal Layered Intrusion, EGU, Vienna, Austria 08.04-13.04.2018 EGU2018-9458.
- Nikolaisen, E.S., Harrison, R. J. & S.A. McEnroe (2018) Slice and view of magnetic mineralogy in oxides and silicates, AGU
- Coint, N., Keiding, J K., Ihlen P. and S.A. McEnroe (2018) Evidence of liquid immiscibility in the 1.8 Ga Raftsund monzonite, Lofoten, Northern Norway, 33rd Geological Nordic Winter Meeting, 10.01-13.01.2018, Copenhagen, Denmark.
- Grant, T. B.; Larsen R.B., Müller A. and S. McEnroe (2018) Evolution of a deep crustal magma conduit system, 33rd Geological Nordic Winter Meeting, 10.01-13.01.2018, Copenhagen, Denmark.
- Pastore, Z., C. Fichler and S.A. McEnroe (2018) The Seiland Igneous Province: Imaging a well preserved Ediacaran deep seated magmatic system by 3d gravity and magnetic modelling. 33rd Geological Nordic Winter Meeting, 10.01-13.01.2018, Copenhagen, Denmark Denmark.
- ter Maat, G., McEnroe, S. Church, N., Michels, A. Pastore,. Oda, H. and R. Larsen (2018) Rock magnetic properties and magnetic carriers of a deep crustal magmatic system, the Reinfjord Ultramafic Complex, Seiland Igneous Province, Northern Norway. 33rd Geological Nordic Winter Meeting, 10.01-13.01.2018, Copenhagen, Denmark.
- Pastore, Z. et al., High-resolution millimetre scale magnetic maps of Cr-spinel grains with primary exsolution and magnetite grains. Nature Conference, Minerals and materials for a sustainable future, Trondheim, Norway, 11-13.09.2018
- Larsen, R., Grant, T.S., Sørensen, B.E., McEnroe S.A. and C. Tegner (2018) Deep crustal homogenization of diverse mafic and ultramafic LIP forming mantle melts: Lessons from the Ediacaran Seiland Igneous Province (SIP), Norway 33rd Geological Nordic Winter Meeting, 10.01-13.01.2018, Copenhagen, Denmark.
- Nikolaise, E. S., R.E.B. Larsen, T. Grant, E. B. Sørensen and S. McEnroe (2018) Platinum Group Minerals in the Reinfjord Intrusive Complex, 33rd Geological Nordic Winter Meeting, 10.01-13.01.2018, Copenhagen, Denmark.
- Michels, A. S. A. McEnroe and C. Fichler (2018) Geophysical modelling of the Leka Ophiolite Complex, 33rd Geological Nordic Winter Meeting, 10.01-13.01.2018, Copenhagen, Denmark.

- Fichler C., Pastore, Z. and S. McEnroe (2018) Comparing the geophysical expression of the Seiland Igneous Province with the SW Barents Sea crust - indications for a LIP during opening of the Iapetus ocean? 33rd Geological Nordic Winter Meeting, 10.01-13.01.2018, Copenhagen, Denmark.
- Church, N. and S. A. McEnroe (2018) Crystal-scale magnetic anomalies revealed by scanning magnetic microscopy. 33rd Geological Nordic Winter Meeting, 10.01-13.01.2018, Copenhagen, Denmark.
- Michels, A., M. Purucker and S.A. McEnroe (2017) Mars' Banded Magnetic Features: Constraints on Their Origin, AGU New Orleans 10-15.12.2017.
- McEnroe, S.A. and A. Michels (2017) Modelling of Surface Fault Structures Based on Ground Magnetic Survey, AGU New Orleans 10-15.12.2017.
- Auglænd, S., Robinson, P., McEnroe, S. A., Terry, M. P., Daczko, N., Krogh, T. E., Kamo, S. L. and K. Hollocher (2017) Tectonostratigraphy, structure and petrology of the Averøy layered eclogite and relations to the Nordøyane UHP domain, W Norway. Eclogite Conference, Åre, Sweden.
- Robinson, Peter, Hollocher, K., Lucas, B., Tucker, R., Schumacher, J. C. and S.A. McEnroe (2017) A major earliest Silurian low-angle detachment in the Bronson Hill magmatic arc, Massachusetts and SW New Hampshire, GSA, Seattle, USA.
- McEnroe, S.A., Robinson, P., Church, N., Fabian, K. ter Matt, G., Michels, A., Pastore, Z., Harrison, R. and L. Brown (2017) Remanent magnetic anomalies and consequences of exsolution and uncompensated spins at phase interfaces in magnetic minerals, International Conference on Rock Magnetism 2017 Utrecht, Netherlands 10-14.07.2017 (invited).
- ter Matt, G. Church, N., Fabian and S. McEnroe. (2017) Micromagnetic modelling of microstructures in magnetite, International Conference on Rock Magnetism, Utrecht, Netherlands 10-14.07.2017.
- Pastore, Z., Church, N. and S. McEnroe. (2017) Modelling of high resolution magnetic microscopy data: An application to a serpentine carbonate magnetite sample from Modum, Norway. International Conference on Rock Magnetism, Utrecht, Netherlands 10-14.07.2017 .
- Michels, A. and S. McEnroe (2017) Paleomagnetic Study of the Leka Ophiolite Complex in central Norway. International Conference on Rock Magnetism, Utrecht, Netherlands 10-14.07.2017
- Church, N. Fabian, K. and S. McEnroe (2017) Characterising strong remanence carriers using non-linear Preisach maps. International Conference on Rock Magnetism, Utrecht, Netherlands 10-14.07.2017 (invited)
- Brown, L., McEnroe, S.A. and P. Robinson, Paleomagnetism and Rock Magnetism of the 920 Ma Tellnes Ore Body, Southern Norway. International Conference on Rock Magnetism, Utrecht, Netherlands 10-14.07.2017
- McEnroe, S.A. (2017) Mapping magnetic minerals and magnetic anomalies, Scanning SQUID microscope Workshop, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba Japan, 16-17.03.2017 (invited)
- McEnroe, S.A., Peter Robinson, N. Church, M.D. Dyar and C. Tegner (2017) Magnetic, chemical and Mössbauer properties of iron in feldspar from the 2.05 Ga Bushveld complex, South Africa: Fe in magnetite exsolution or in solid solution? Kochi International Workshop on paleo-, rock and environmental magnetism,

- Celebrating 35 years of research in Kochi 28.02-01.03.2017 Center for Advanced Marine Core Research. Kochi University, Japan (invited).
- McEnroe, S.A., Peter Robinson, Purucker, M. (2017) Satellite Magnetism, Magnetic Anomalies and Nanomagnetism, Magnetism from Space to Atom Symposium, 17.02.2017, AIST, Tsukuba, Japan (invited).
- McEnroe, S.A., Robinson, P., Michels, A. Pastore, Z., ter Maat, G., Church, N. and C. Fichler (2017) Magnetic anomalies and minerals: consequences of phase interfaces in magnetic oxides, and varied degrees of serpentinization, Artic Days Conference, 29.05-02.06.2017 Svolvær, Norway, (Keynote). NGF Abstracts and Proceedings, No 3, p. 40-41.
- Robinson, P., McEnroe, S.A., L. L. Brown, F. Heidelbach, F. Langenhorst & N. Church (2017) The Heskestad Anomaly of the Bjerkreim-Sokndal Layered Intrusion, South Rogaland: What is the source of extreme remanent magnetism? Artic Days Conference, 29.05-02.06.2017 Svolvær, Norway, NGF Abstracts and Proceedings, No 3, p. 43-44.
- Fichler, C., Pastore, Z., McEnroe, S. & A. Michels (2017) Large ultramafic complexes in the southwestern Barents Sea from gravity and magnetic modelling and geological implications, Artic Days Conference, 29.05-02.06.2017, Svolvær, Norway. NGF Abstracts and Proceedings, No 3, p. 41-42.
- Pastore, Z., Fichler, C. & S. A. McEnroe (2017) Gravity and Magnetic anomalies of the mafic/ultramafic Seiland Igneous Province, Artic Days Conference, 29.05-02.06.2017, Svolvær, Norway, NGF Abstracts and Proceedings, No 3, p. 40-41.
- Purucker, Michael & Suzanne McEnroe (2017) Large-scale constraints on tectonics and macroscopic magnetic properties of the Earth's lithosphere from the Swarm constellation and CHAMP, Fourth Swarm Science Meeting and Geodetic Missions Workshop (SWARM) Baniff, Canada 20-24 March, 2017.
- Pastore, Z., McEnroe, S. N. Church, Fichler, C., Fumagalli, P. C., Ter Matt, G., Larsen_R.B., & H. Oda (2017) The Ultramafic Complex of Reinfjord: from the Magnetic Petrology to the Interpretation of the Magnetic Anomalies, European Geosciences Union, 23-28.04.2017, Vienna, Austria.
- ter Maat, G. W., McEnroe, S., Stange, M., Fabian, K. & N. Church (2017) The role of microstructures in magnetite on magnetic anomalies, a case-study from the Stardalur volcano, Iceland, European Geosciences Union, 23-28.04.2017, Vienna, Austria.
- Grant, T., McEnroe, S., Eske, B., Sørensen, Larsen, R., Pastore, Z., Grannes, K. & E. Nikolaisen (2017) Serpentinization and carbonation of pristine continental ultramafic rocks and applications to the oceanic crust; H₂O-CO₂ alteration of dunites and re-distribution of Ni-Cu-PGE in sulphide deposits European Geosciences Union, 23-28.04.2017, Vienna, Austria.
- Fichler, C., Pastore, Z. & S.A. McEnroe (2017) Large ultramafic complexes and metamorphic processes from the Seiland Igneous Province to the Veslemøy high, Barents sea. Norwegian Geology Conference, 09.-11.01.2017, Oslo, Norway
- McEnroe, S.A., Peter Robinson, C. Tegner, M.D. Dyar & N. Church (2016) Magnetic, Chemical and Mössbauer Tracking of the Solid Solution of Fe and Exsolution of Magnetite in Plagioclase of the 2.05 Ga Bushveld Complex, South Africa, AGU Fall Meeting 09-15.12 2016, San Francisco, USA

- Fichler, C., S.A. McEnroe, A., Michels, Z., Pastore & E. Strømøy (2016) Integrated geophysical interpretation of ultramafic rocks in the crust of onshore and offshore Norway, Onshore-offshore relationships on the North Atlantic margins, NGU, Trondheim, Norway.
- Larsen_R.B., T. Grant, B. Sørensen & S. McEnroe (2016) Mixing – Mingling and Modification of Magmas in a Giant Deep Crustal Magmatic Reservoir: The Seiland Igneous Province, Northern Norway, AGU Fall Meeting 09-15.12 2016, San Francisco, USA.
- ter Maat, G., M. Stange, N. Church & S. A. McEnroe (2016) The Effect of Microstructures in Magnetite on Remanent Magnetic Anomalies: Implications for Geophysical Exploration of Natural Resources, AGU Fall Meeting 09-15.12 2016, San Francisco, USA
- Michels, A. & S. A. McEnroe (2016) Combined gravity and magnetic interpretation of the Leka Ophiolite Complex, AGU Fall Meeting 09-15.12 2016, San Francisco, USA
- Pastore, Z., N. Church, Ter Matt, G., Fichler, C. McEnroe, S. & A. Michels (2016) Large scale magmatic event, magnetic anomalies and ore exploration in northern Norway, AGU Fall Meeting 09-15.12 2016, San Francisco, USA
- Brown, L. B & S.A., McEnroe (2016) A Permian pole from Paleoproterozoic Gneisses of the Lofoten Islands, Norway, AGU Fall Meeting 09-15.12 2016, San Francisco, USA
- McEnroe, S. A., Robinson, Peter, Dyar, M.D., Tegner, C. & N. Church (2016) Crustal magnetic signature of planets: Tracking the solid solution of Fe and exsolution of magnetite in Bushveld plagioclase by magnetic and Mössbauer properties, Geological Society of America, *Abstracts with Programs*. Vol. 48, No. 7, doi: 10.1130/abs/2016AM-284696, Denver, USA
- Pastore, Z., ter Maat, G., Michels A. C. & S.A. McEnroe (2016) Thee Ultramafic Complex of Reinfjord: from the Magnetic Petrology to the Interpretation of the Magnetic Anomalies, 3rd ABYSS workshop, 1-2.09.16 University of Oslo, Norway.
- Fichler, C., McEnroe, S., Pastore, Z. & A. Michels (2016) Geophysical modelling and interpretation of ultramafic bodies, onshore and offshore Norway, 4th Serpentine Conference, 25-29.06.2016, Sete, France
- Pastore, Z., Fichler, C. & S. A. McEnroe (2016) The deep structure of the Seiland Igneous Province: A major feature at the southwestern border of the Barents Sea, Onshore-offshore relationships on the North Atlantic margins
- McEnroe, S.A., C. Tegner, P. Robinson, M. D. Dyar & N. Church (2016) Magnetic, chemical and Mössbauer tracking of the solid solution of Fe and exsolution of magnetite in plagioclase of the 2.05 Ga Bushveld Complex, South Africa, AGU Fall Meeting 09-15.12 2016, San Francisco, USA
- Robinson, P. & S.A. McEnroe (2016) Exchange bias in minerals related to chemical-magnetic structures at the subnanometer scale, SCANDEM 7-10.06 Trondheim, Norway (invited)
- McEnroe, S.A. and P. Robinson (2016) Quenched and annealed nanostructures and a new story about self- reversed thermoremanent Magnetization, SCANDEM 7-10.06 Trondheim, Norway
- Biedermann, A.R., Heidelberg, F., Jackson, M., Bilardello, D., Michels, A., Robinson, P., McEnroe, S.A.: Effect of magnetic anisotropy on remanent magnetization in the Bjerkreim Sokndal Layered Intrusion, Southern Norway, 15th Castle Meeting, New Trends on Paleo, Rock and Environmental Magnetism, 21-27.08.16, Dinant, Belgium
- ter Maat, G., Stange, M., N. Church, K.Fabian and S. McEnroe (2016) From scanning-electron microscopy to MERRILL hysteresis modeling - A case study of oxy-exsolved

- magnetite nanoparticles from Stordalur, Iceland, 15th Castle Meeting, New Trends on Paleo, Rock and Environmental Magnetism, 21-27.08.16, Dinant, Belgium
- Jensen, H., Michels, A., McEnroe, S. and Peter Robinson (2016) Magnetic properties of highly oxidized amphibolite-facies rocks from Modum, Norway, 15th Castle Meeting, New Trends on Paleo, Rock and Environmental Magnetism, 21-27.08.16, Dinant, Belgium
- Stange, M., S.A., McEnroe, N. Church, G. ter Maat, and K.Fabian (2016) The magnetic and mineralogical properties of the Stordalur Volcano, Iceland 15th Castle Meeting, New Trends on Paleo, Rock and Environmental Magnetism, 21-27.08.16, Dinant, Belgium
- ter Maat, G., Michels, A., Church, Z. Pastore, S. McEnroe, R. Larsen (2016) Rock magnetic properties of a deep crustal volcanic system: The Reinjford Ultramafic Complex, Seiland Igneous Province, Northern Norway, 15th Castle Meeting, New Trends on Paleo, Rock and Environmental Magnetism, 21-27.08.16, Dinant, Belgium
- Fabian, K., McEnroe, Magnetic properties of natural pyrrhotite: superstructures, microstructures and phase transitions, 15th Castle Meeting, New Trends on Paleo, Rock and Environmental Magnetism, 21-27.08.16, Dinant, Belgium
- Michels, A.C., McEnroe, S. A. and N. Church (2016) Gazing across the Moho, 15th Castle Meeting, New Trends on Paleo, Rock and Environmental Magnetism, 21-27.08.16, Dinant, Belgium
- McEnroe, S. A., Robinson, P.; Fabian, K., Harrison, R. J., , Thomas, C. I. , and Mukai, H.: Quenched and annealed nanostructures and a new story about self-reversed thermoremanent magnetization. Scandem 2016 Conference, 7-10.06 Trondheim, Norway (invited oral presentation)
- McEnroe, S.A. and P. Robinson (2016) Quenched and annealed nanostructures and a new story about self- reversed thermoremanent Magnetization, SCANDEM 7-10.06 Trondheim, Norway
- Church, N., Fabian, and S.A. McEnroe (2016) Mapping microstructures and interactions by Preisach mapping, European Geosciences Union, Vienna, Austria 17–22.04.2016.
- Biedermann, A., McEnroe, S.A., Jackson, M. and A. Michels (2016) Magnetic Fabrics in the Bjerkreim Sokndal Layered Intrusion. European Geosciences Union, Vienna, Austria 17–22.04.2016.
- Smirnov, A.V., Tarduno, J.A., Kulakov, E.V. McEnroe, S.A. and R.K. Bono (2016) Core history from paleomagnetic data: Potential changes in stratification but no evidence for a Mesoproterozoic inner core age. European Geosciences Union, Vienna, Austria 17–22.04.
- McEnroe, S. A., Purucker, M. and P. Robinson (2015) Magnetism at depth: A view from an ancient continental subduction zone, (invited) AGU Fall meeting, 13-18.12 2015, San Francisco, USA.
- Church, N., Fabian, K., and McEnore, S.A. (2015) Non-linear sampling of Preisach distributions: A method to examine strong remanence carriers with coexisting MD magnetite. AGU Fall Meeting 13-18.12 2015 San Francisco, USA.
- McEnroe, S.A. Pastore, Z., and C. Fichler, (2015) Geophysical Interpretation of Mantle Magmatism in the Seiland Province and adjacent Barents Sea: Implications for tectonic emplacement of the Kalak Nappe Complex. AGU Fall Meeting 13-18.12 2015, San Francisco, USA
- Pastore, Z., Church, N.S., McEnroe, S.A. and C. Fichler (2015) Geophysical Interpretation of Mantle Magmatism in the Seiland Province: the Geometry of the Reinjford Ultramafic Complex. AGU Fall Meeting, 13-18.12 2015, San Francisco, USA

- Biedermann, A.R., McEnroe, S.A., and M. Jackson (2015) Magnetic Fabrics and Natural Remanent Magnetization in the MCU IVe' Unit of the Bjerkreim Sokndal Layered Intrusion. AGU13-18.12 2015, San Francisco, USA.
- Purucker, M. and S. A. McEnroe (2015) Estimating susceptibility and magnetization within the Earth's continental crust: Petrophysical and Satellite approaches, 26th IUGG 22.06-02.07, Prague, Czech Republic.
- Pastore, Z., C. Fichler and S. A. McEnroe (2015) Potential field modeling of the Seiland Igneous Province in the geodynamic framework of the northern Baltican margin, ICAM, 02-05.06, Trondheim, Norway.
- Church, N., Fabian, and S.A. McEnroe (2015) Analyzing remanent magnetization by adaptive Preisach mapping, 26th IUGG 22.06-02.07, Prague, Czech Republic.
- Brown, L. L. and S. A. McEnroe (2015) Paleomagnetism of Paleoproterozoic Rocks from Lofoten, Norway: Can They Provide a Baltica Pole for 1.8 Ga? AGU, 3-7.05, 2015 Montreal, Canada.
- Church, N., J. Austin, S. A. McEnroe and Phil Schmidt (2015) Rock magnetic properties and mineral microstructure in high-remnance samples from layered intrusions, 26th IUGG 22.06-02.07, Prague, Czech Republic.
- ter Maat, G., Z. Pastore, A. Michels, S. McEnroe (2015) Rock- and paleomagnetic study of the ultramafic rocks of the Rein fjord intrusion, Northern Norway, 26th IUGG 22.06-02.07, Prague, Czech Republic.
- Michels, A., S. McEnroe, N. Church and Z. Pastore (2015) Geophysical Model of the Leka Ophiolite Complex, 26th IUGG, 22.06-02.07, Prague, Czech Republic
- Biedermann, S.A., McEnroe, A., Michels, G.W. ter Maat and R. Larsen (2015) Magnetic fabrics in the Seiland Igneous Province, implications for emplacement models, 26th IUGG 22.06-02.07, Prague, Czech Republic.
- Michels, A., N. Church, S. McEnroe, A. Biedermann, and G. ter Maat (2015) Paleomagnetic Pole and rock magnetic characterization of the Leka Ophiolite Complex, 26th IUGG 22.06-02.07, Prague, Czech Republic.
- Pastore, Z., C. Fichler and S. McEnroe (2015) The deep structure of the Seiland Igneous Province Norway: 3D gravity and magnetic modeling, 26th IUGG, 22.06-02.07, Prague, Czech Republic.
- Berg-Edland Larsen, R. and S. A. McEnroe, Exploration strategies to discover unconventional Ni-Cu-PGE deposits in extreme environments: the Arctic Seiland igneous province, 3rd NordMin Workshop: On- and Offshore Exploration and Prospecting in Extreme Nordic Environments, Reykjavík, Iceland March 23-24, 2015.
- McEnroe, S. A., Berg-Edland Larsen, R., G. ter Meat, Z. Pastor, A. Michels, A. Biedermann (2015) Magnetic mineralogy and properties refining exploration strategies for unconventional Ni-Cu-PGE deposits in extreme environments: the Arctic Seiland Igneous province, 3rd NordMin Workshop: On- and Offshore Exploration and Prospecting in Extreme Nordic Environments, Reykjavík, Iceland March 23-24, 2015.
- McEnroe, S.A., Robinson, P. and N. Church (2014) The influence of phase interfaces in magnetic minerals on the nature of magnetic anomalies, GSA, Vancouver, BC, Canada, 19-22, 2014. (invited)
- McEnroe, Suzanne A and Michael Purucker (2014) Estimating susceptibility and magnetization within the Earth's continental crust: Petrophysical and Satellite approaches, AGU 15-19, San Francisco, USA

- Brown, Laurie and Suzanne A. McEnroe (2014) 900 Ma Pole from the Bjerkreim-Sokndal Layered Intrusion, Rogaland Igneous Complex, Norway: Where Was Baltica in the Early Neoproterozoic? AGU 15-19.12, San Francisco, USA.
- Robinson, P McEnroe, S.A., Brown, L. L. Heidelbach, F., Langenhorst, F. (2014) The Heskestad anomaly of the Bjerkreim-Sokndallayered intrusion, Norway: tracking the source of extreme magnetic remanence, GSA, Vancouver, BC, Canada, 19-22, 2014.
- McEnroe, S.A. and P. Robinson (2014) Magnetism at Depth: Magnetic properties of granulite-facies rocks and rocks exhumed from the eclogite facies (> 120km). What do their properties tell us about magnetization in the deep crust? (2014) New trends on Paleo, Rock and Environmental Magnetism, Évora, Portugal, 31.08-06.09.2014
- Robinson, P. and S.A. McEnroe, K. Fabian and R. Harrison, (2014) Lamellar Magnetism in the Rhombohedral Oxides: How does it work? New trends on Paleo, Rock and Environmental Magnetism, Évora, Portugal, 31.08-06.09.2014
- Brown, L. and S. A. McEnroe (2014) 900 Ma Pole for Southwestern Baltica: Paleomagnetism of the Bjerkreim Sokndal Layered Intrusion, Rogaland Igneous Complex, Norway (New trends on Paleo, Rock and Environmental Magnetism, Évora, Portugal, 31.08-06.09.2014
- Church, N. and S. A. McEnroe (2014) Needles in cumulate stacks: characterising magnetic recorders in layered intrusions New trends on Paleo, Rock and Environmental Magnetism, Évora, Portugal, 31.08-06.09.2014
- Fabian, K., Thomas, C, McEnroe, S.A., Robinson, P., Mukai, H. Law, J. and R. J. Harrison, (2014) Magnetic high-field studies of nanostructures in natural and synthetic ilmenite-hematite solid solutions New Trends in Paleo, Rock and Environmental Magnetism, Evora Portugal 31.08-06.09.2014
- Michels, A., N. Church and S. A. McEnroe (2014) Characterization of the magnetic properties of the Leka Ophiolite Complex, New trends on Paleo, Rock and Environmental Magnetism, Évora, Portugal, 31.08-06.09.2014
- Robinson, P., McEnroe, S. A. and Fabian, K. (2013) Modum MATERA Seminar, 03.06-05.06.13 Modum, Norway.
- McEnroe, Suzanne A. (2013) From magnetic anomalies to exchange bias: Effects of micron and nano-size lamellae on magnetic properties in natural oxide minerals (invited) The joint STINT Workshop on functional materials and minerals, Uppsala, Sweden 10-11.06.2013.
- McEnroe S. A. (2013) Fine Structure of Self-reversed Thermo-remanent Magnetization: Effects of Composition Waves Produced by Ordering During Quench and Annealing of Metastable Ferri-ilmenite Solid Solutions by EGU2013-8076, EGU, Vienna, Austria.
- Fabian (2013) Ordering, nanostructure and high-field magnetization of quenched and annealed metastable ilmenite-hematite solid solutions by Karl Fabian et al. EGU2013-8710, EGU, Vienna, Austria.
- Purucker, M. E., Connerney, J., Blakely, R., Bracken, R., Nowicki, S., Le, G., Sabaka, T., Bonalsky, T., Kuang, W., Ravat, D., Ritz, C., Vaughan, A., Gaina, C., McEnroe, S. and V. Lesur (2013) EGU Icebase: A suborbital survey to map geothermal heat flux under an ice sheet, EGU2013-13740, EGU, Vienna, Austria.
- McEnroe, S. A. (2013) Magnetic Anomalies from Eclogite and Deep-Seated Rocks in Scandinavia: Contrasting Environments and Magnetic Properties, ESA-Living Planet Symposium, Edinburgh, UK (4-P-345) 9-13.09.2013

- McEnroe S. A. (22.02.2013) Natural memory systems: Old rocks, Long Memories and Consequences of Remanent Magnetization on Anomaly Interpretation, Physics Collegium, NTNU, Trondheim, Norway.
- McEnroe S. A. Peter Robinson (2012) Rocks that remember: Exsolution lamellae and microstructures in oxides that control magnetic anomalies: Research Seminar Series Laboratoire de Geologie de Lyon Ecole normale supérieure de Lyon, France
- Robinson, Peter, R.J. Harrison, S.A. McEnroe, K.Fabian and F. Langenhorst (2012) Essential Features of Lamellar Magnetism in Exsolved Rhombohedral Fe-Ti Oxides European Seminar Series in the Earth Sciences Laboratoire de Geologie de Lyon Ecole normale supérieure de Lyon, France
- McEnroe S. A. and L. B. Brown (2012) Effects of microstructures on acquisition of remanence and paleomagnetic poles, European Seminar Series in the Earth Sciences Laboratoire de Geologie de Lyon Ecole normale supérieure de Lyon, France (06.11.2012).
- Peter Robinson, S. A. McEnroe, R.J. Harrison, K.Fabian and N. Miyajima (2012) How can it happen so fast? Chemical and Magnetic Consequences in Quenched and Annealed Ferri-ilmenite Solid Solutions, European Seminar Series in the Earth Sciences Laboratoire de Geologie de Lyon Ecole normale supérieure de Lyon, France (06.11.2012).
- McEnroe, S.A. and P. Robinson (2012) Magnetic properties and anomalies related to eclogite- and high-pressure granulite-facies mafic rocks: What do they tell about magnetization of deep-crustal lithosphere? AGU Fall Meeting, San Francisco, USA
- McEnroe S. A., Fabian, K. Robinson, P. and Shcherbakov, V. P (2012) Remanent magnetic anomalies: The influence of exsolution lamellae and other microstructures in oxides on Q values, and the resulting anomaly, 9th International Conference Problems of Geocomos, 08-12.10, St. Petersburg, Russia (invited) p.55-56.
- McEnroe, S.A., (2012) Magnetic properties of serpentine rocks from the Leka Ophiolite, Norway, Serpentine Days Workshop in Porquerolles Island, France, 2-6 September 2012.
- McEnroe, S.A. and L. L. Brown (2012) Magnetic Mineralogy and Paleomagnetism of Proterozoic Grenville Rocks of the Adirondack Highlands, USA, Supercontinent Symposium, 25-29th September, Helsinki, Finland.
- McEnroe S. A. (2012) Old rocks, long memories: Consequences of remanent magnetization on anomaly interpretation, Geophysics Seminar, Uppsala University, Uppsala, Sweden.
- Brönnner, M., Fabian, K., Nasuti, A. and S. A. McEnroe (2012) An aeromagnetic double cover of Karasjok, Norway Vol. 14, EGU2012-9992, EGU, Vienna, Austria.
- Robinson, P., R.J. Harrison, K. Fabian, S. A. McEnroe, and N. Miyajima (2012) A new perspective on self-reversed thermo-remanent magnetization and room-temperature magnetic exchange bias in quenched and annealed ferri-ilmenite solid solutions, Vol. 14, EGU2012-10353, EGU, Vienna, Austria.
- Fabian, K., Shcherbakov, V. P. and S. A. McEnroe (2012) Measuring the Curie temperature, Vol. 14, EGU2012-7087, EGU, Vienna, Austria.
- McEnroe S. A, Fabian, K. and P. Robinson (2012) Exsolution lamellae and other microstructures in oxides as an influence on magnetic anomalies, Vol. 14, EGU2012-6072, EGU, Vienna, Austria.
- McEnroe S. A, Fabian, K. and P. Robinson, Harrison, R. and L. Brown (2011) Crustal Magnetism and Effects of Exsolution Lamellae on Magnetic Properties: Importance of Remanent Magnetic Anomalies, Japan Geoscience Union Meeting, 22-27.05 Chiba, Japan

- McEnroe, S. A., P. Robinson, K. Fabian, R.J. Harrison, N. Miyajima, F. Langenhorst (2011) Interfaces and exchange coupling, Goldschmidt Conference, Prague, CZ.
- Sales, M., Brok, E., Lefmann, K., Kuhn, L., Harrison R. J., Schmidt W., Dewhurst C., Robinson, P. and S. A. McEnroe (2011) Remanent magnetization in natural nano-structured hemo-ilmenite, ECNS 2011.
- McEnroe, S.A. and L. Brown, (2011) Paleomagnetism and Magnetic Mineralogy of Grenville Metamorphic and Igneous Rocks of the Adirondack Highlands, USA, GSA Annual meeting, MN, Minnesota, USA.
- McEnroe, S.A. Brown, L., Robinson, P. and K. Fabian (2011) Effects of Exsolution lamellae on magnetic properties of crustal rocks and contribution to remanent magnetic anomalies, AGU Fall meeting, San Francisco, USA.
- Brown, L and S.A. McEnroe (2011) Paleomagnetism and Magnetic Mineralogy of Grenville Metamorphic and Igneous Rocks of the Adirondack Highlands, USA: Was Rodinia Stationary ~1 Ga? International Union Geodesy and Geophysics, 29.06-08.07.11 Melbourne, Australia.
- McEnroe, S. A., Robinson, P., Fabian, K. (2011) Understanding the mineral sources of remanent crustal magnetic anomalies, NGU-Dagen 07.-08.02 2011 Trondheim, Norway.
- McEnroe, S. A., Robinson, P., Fabian, K. (2011) Nano-oxides and thin films? Høvringen MATERA Seminar, 28.02-02.03.11 Høvringen, Norway
- Robinson, P., McEnroe, S. A. and Fabian, K. (2011) Høvringen MATERA Seminar, 28.02-02.03.11 Høvringen, Norway.
- McEnroe, S. A., Robinson, P. and K. Fabian (2011) Høvringen MATERA Seminar, 28.02-02.03.11 Høvringen, Norway.
- Fabian, K., Robinson, P. and S. A. McEnroe (2011) Høvringen MATERA Seminar, 28.02-02.03.11 Høvringen, Norway.
- Brown, L.L., McEnroe, S. A., Robinson, P., Fabian, K. (2011) Remanent magnetic anomalies and effects of exsolution lamellae on magnetic properties of crustal rocks, International Union Geodesy and Geophysics, 29.06-08.07.11, Melbourne, Australia.
- McEnroe, S. A. (2011) Remanent magnetic anomalies, NGU Mineral Resources Seminar 26-27.01.11, Brekstad, Norway.
- McEnroe, S. A. (2011) Rocks that Remember, NGU Kjelruf Seminar, NGU, 16.01.11, Trondheim, Norway
- McEnroe, S. A., Fabian, K., Robinson, P., Harrison, R. J. and L. Brown, (2011) Crustal Magnetism and effects of exsolution lamellae on magnetic properties: Importance of remanent magnetic anomalies (invited), Japan Geoscience Union, 22-27.05 Chiba, Japan.
- Fabian, K., Shcherbakov, V., McEnroe, S. A., and P. Robinson, (2011) Mean-field and micromagnetic models for exchange bias and nanostructure magnetism based on ilmenite-hematite solid solutions (invited). Japan Geoscience Union, 22-27.05 Chiba, Japan.
- McEnroe, S. A., Fabian, K., Robinson, P., Miyajima, N., Schmidt, P. W. And D. Clark (2011) Reduction-exsolution of magnetite in ilmenite: Phase interfaces and, exchange coupling, European Geosciences Union, 03.04.-08.11, Vienna, Austria.
- Fabian, K., Shcherbakov, V., Robinson, P. and S. A., McEnroe (2011) Geometric mean-field models for ilmenite-hematite solid solutions, European Geosciences Union, 03.04.-08.11, Vienna, Austria.

- Fabian, K., Brönnert, M., Olesen, O. and S. A., McEnroe (2011) Separation of induced and remanent anomalies through analyses of multiple aeromagnetic surveys, European Geosciences Union, 03.04.-08.11, Vienna, Austria.
- Harries, D., Fabian, K., Pollock, K., and S. A. McEnroe (2011) Correlation of microstructures and exsolution lamellae in natural pyrrhotites and magnetic properties, European Geosciences Union, 03.04.-08.11, Vienna, Austria.
- Sales, M., Brok, E., Lefmann, K., Kuhn, L., Harrison R. J., Schmidt W., Dewhurst C., Robinson, P. and S. A. McEnroe (2011) Remanent magnetization in natural nano-structured hemo-ilmenite Nordic Physics Meeting, Helsinki, Finland.
- McEnroe, S. A., N. Miyajima, P. Robinson, P. Fabian, K. P. Schmidt, D. Clark, T. Boffa Ballarn and B. P. Burton (2010) Interfaces of magnetite with rhombohedral Fe-Ti oxides: Magnetite exsolved from syntehtetic titanohematite (ILM 40), and magnetite from natural ilmenite. Travaux Geophysiques, p.51, 12th Castle Meeting on Paleo, Rock and Environmental Magnetism, Nove Hradý, Czech Republic.
- Fabian, K., S. A., McEnroe, P. Robinson (2010) Quantifying the magnetic effects of the Fe-Ti distribution geometry in the ilmenite-hemtitite solid solutions. P. 26, Travaux Geophysiques, 12th Castle Meeting on Paleo, Rock and Environmental Magnetism, Nove Hradý, Czech Republic.
- Boschker, J. E., Monsen, Å.F. , Folkman, C. M., Folven E., McEnroe, S., Grepstad J.K., Eom, C. B., Wahlströ E. and T. Tybell (2010) Epitaxial control of periodic lattice distortions in La-based perovskite thin films, 17th International Workshop on Oxide Electronics, (19-22.09.2010) Awaji City, Hyogo 656-2306, Japan.
- Boschker, J. E., Monsen, Å.F., Folven E., McEnroe, S., Grepstad J.K., Wahlströ E. and T. Tybell (2010) Step-edge controlled strain in epitaxial perovskite thin films. 1st annual workshop on Nanotechnology for Microsystems, 31.05-02.06, Tønsberg Norway.
- Robinson, P., McEnroe, S. A., Fabian, K. and N. Miyajima (2010) Rhombohedral oxides, phase separation and magnetic properties. Seminar in ‘Structure, Reactivity and Properties of Oxide Materials’, *Bonnbrach, Germany* 30-31 January.
- McEnroe, S. A., Robinson, P., Fabian, K (2010) Magnetic and material properties of synthetic ilmenite samples: Templates for thin film? Høvringen Seminar 07.02- 10.02.2010.
- Fabian, K, Peter Robinson, McEnroe, S. A. (2010) Clusters and holes: Exchange networks in hematite-ilmenite solid solutions, Høvringen Seminar on magnetic and material properties of synthetic ilmenite samples 07.02- 10.02.2010.
- Kristjánsson, L., H.P. Gunnlaugsson, S.A. McEnroe and K. Fabian (2010). Segulsviðsfrávikin Stardal og orsakir floss: yfirlit um rannsóknir 1968–2010 (The Stardalur magnetic anomaly and its causes, in Icelandic). Geoscience Society of Iceland, 2010 Fall Meeting abstracts volume, 29–33.
- Schmidt, P., McEnroe, S. A., Robinson, P., Fabian, K., Gattacceca, J., Hankard F. and Florian Heidelberg Magnetic moments of fine particles from micromagnetic surveys, ASEG Extended Abstracts 2010 doi:10.1071/ASEG2010ab127 (Best poster award)
- Robinson, P., McEnroe, S. A., Fabian, K (2010) TEM and magnetic properties of ilmenite 60. Magnetic and material properties of synthetic ilmenite samples, Høvringen Seminar 07.02- 10.02.2010.
- McEnroe, S. A. (2009) Rocks That Remember, **Bullard Lecture**, AFU Fall Meeting, *San Francisco, USA*, Eos Trans. AGU, 90(52) Fall Meet. Suppl.

- Hankard, F., Gattacceca J., Fermon, C., Pannetier-Lecoeur, M., Langlais, B., Quesnel, Y., Rochette, P. and S. A., McEnroe (2009) Magnetic field microscopy of rock samples using a Giant Magneto Resistance-based scanning magnetometer AFU Fall Meeting, *San Francisco, USA*. AGU, Fall Meet. Suppl.
- McEnroe, S. A., Fabian, K., Peter Robinson, Giana, C. and Brown, L. B. (2009) Crustal Magnetism and Rocks that Remember, ESA 2nd SWARM Meeting, *Postdam, Germany*.
- Brown, L. B. and S. A. McEnroe (2009) Anorthosites as a Source of Magnetic Anomalies, *IAGA, Soporo Hungary*.
- Fabian, K., Peter Robinson and S. A. McEnroe (2009) The Magnetic Signature of Basal Plane Anisotropy in Hematite, *IAGA, Soporo Hungary*.
- Fabian, K., S. A. McEnroe and Peter Robinson (2009) Remanences of the Past, *IAGA, Soporo Hungary*.
- Fabian, K., McEnroe, S. A., and P. Robinson (2009) Nanodots and Exchange bias, Nanotechnology and NanoScience Meeting, *Lillihammer, Norway*
- McEnroe, S. A., Fabian, K., Robinson, P. Gattacceca J. and Langenhorst, F. (2009) Mineral sources of remanent crustal magnetic anomalies, NFR Petromaks Meeting, Statoil, *Trondheim, Norway*.
- Fabian, K., McEnroe, S. A., and P. Robinson (2009) Lamellar Magnetism (invited) *EGU, Vienna, Austria*.
- McEnroe, S. A., Fabian, K., Robinson, P. Gattacceca J. and Langenhorst, F. (2009) Understanding the mineral sources of remanent crustal magnetic anomalies, *EGU, Vienna, Austria*.
- Fabian, K., McEnroe, S. A., and P. Robinson (2009) Clusters and holes: Exchange networks in hematite-ilmenite solid solutions, *EGU, Vienna, Austria*.
- Brok, E., Lefmann K., Theil Kuhn L, McEnroe S. A., Robinson P, Roessli B., Harrison, R. (2009) Origin of remanent magnetization in hemo-ilmenite investigated with polarized neutron scattering, *International Conference on Neutron Scattering May 3-7, Knoxville, Tennessee, USA*.
- Brok, E., Lefmann K., Theil Kuhn L, McEnroe S. A., Robinson P, Roessli B., Harrison, R. (2009) Origin of remanent magnetization in hemo-ilmenite investigated with polarized neutron scattering, NEMS Summer School & Symposium 17.-21.8. *Höör, Sweden*.
- Boschker, J.E., Monsen, Å, Folven, E., McEnroe, S., Grepstad, J., Wahlström, E. and T. Tybell (2009). In-plane modulations in La_{0.7}Sr_{0.3}MnO₃ thin films: effect of substrate and initial growth. STINT Workshop on Oxide and Interface Magnetism.
- 11-16 - 2009-11-17 McEnroe, S. A. Fabian, K. and P. Robinson (2009) Rock Hard Memory Systems: Is your next Harddrive based on a Norwegian Oxide? *NGU Seminar 2009, Trondheim, Norway*.
- McEnroe, S. A., P. Robinson, K. Fabian, J. Gattacceca, F. Langenhorst and F. Heidelbach (2009) Mineral Exploration: Bridging the Gap from the Mineral-scale to the Airborne Survey, *NGU Seminar 2009, Trondheim, Norway*.
- Brown, L., McEnroe S. A., and K. Fabian (2008) Rock magnetic and paleomagnetic properties of oxide-rich samples from the El Lago iron ore deposit, High Andes, Chile, *International Rock Magnetism Meeting, Corsica, France, June 2008*.

- Fabian, K., S. A. McEnroe, P. Robinson, N. Miyajima, T. Boffa Ballaran and B. Burton (2008) Magnetic hysteresis shift and exchange bias in synthetic hematite-ilmenite solid solutions; The Structure and Properties of Materials at High Pressure" *EU RITA Workshop, Verbania, Italy*.
- Fabian, K., McEnroe, S. A. Robinson, P., Shcherbakov, V. P., and B. P. Burton (2008) Clusters and holes: Exchange networks in hematite-ilmenite solid solutions, in Microstructure and Mineral Behavior, *Final EuroMinSci Conference, Obernai, France, 24-26 November 2008*.
- Fabian K., McEnroe, S. A., Leonhardt, R. and D. I. Hofmann (2008) Which theories of remanence acquisition are necessary to improve paleointensity determinations (Invited) *International Rock Magnetism Meeting, Corsica, France, June 2008*.
- Fabian, K., McEnroe, S. A. and P. Robinson (2008) Natural lamellar remanent magnetization: Low-temperature properties and models of remanence acquisition, EUG, Vienna, Austria.
- McEnroe, S. A., P. Robinson and K. Fabian (2008) Effects of pressure on magnetic properties of oxide minerals: unanswered questions; The Structure and Properties of Materials at High Pressure" *EU RITA Workshop, Verbania, Italy*.
- McEnroe, S. A., Fabian, K. Robinson, P. and J. Gattacceca, Understanding crustal magnetic anomalies by mapping magnetic interactions from nanometer to millimeter scale in Microstructure and Mineral Behavior, *Final EuroMinSci Conference, Obernai, France, 24-26 Novembre 2008*.
- McEnroe, S. A., Robinson, P. and K. Fabian (2008) Mineral Magnetism, Opportunities, Challenges and Cooperation's (Invited) *International Rock Magnetism Meeting, Corsica, France, June 2008*.
- Robinson, P., McEnroe, S. A, Fabian K., (2008) Geikielite and Coupled Spinel-Rutile Exsolution from Titanohematite in the Mesoproterozoic Granulite Facies, South Norway, *GSA, Houston, Texas, USA*.
- Reimann, C. Fabian, K., McEnroe, S. A. (2008) The magnetic signature of atmospheric dust influx along a transect through Oslo: terrestrial moss versus O-horizon soil samples, *EuroSoils, Vienna, Austria*.
- Robinson, P., S. A. McEnroe and K. Fabian (2008) Geikielite and coupled spinel-rutile exsolution from titanohematite in the mesoproterozoic granulite facies, south Norway: keys to remanence and lamellar magnetism in planetary crusts; The Structure and Properties of Materials at High Pressure" *EU RITA Workshop, Verbania, Italy*.
- McEnroe, S. A., K. Fabian, and P. Robinson (2008) Remanence control on planetary anomalies due to exchange-coupled nanoscale intergrowths in natural magnetic oxides in Nanogeoscience Symposium *International Geological Congress, Oslo Norway August 2008*.
- Fabian K., McEnroe, S. A., Robinson, P. and B. Burton (2008) An experimental survey of magnetic behavior of metastable ilmenite-hematite solid solutions (2008) *2nd EuroMinSci Conference, Giens, France, 2 pp*.
- McEnroe, S. A., Fabian, K., Harrison, R. J., Brown, L.L. and P. Robinson (2008) Extreme magnetic properties due to exchange coupling in hematite-maghemite intergrowths, *2nd EuroMinSci Conference, Giens, France, 1 pp*.
- Robinson, P., Fabian K., McEnroe, S. A, Ionic arrangements and magnetic interactions in ordered ferri-ilmenite solid solutions: Visual key to low-temperature behavior (2008) *2nd EuroMinSci Conference, Giens, France, 2 pp*.

- Fabian, K., McEnroe, S. A. and P. Robinson (2008) Natural lamellar remanent magnetization: Low-temperature properties and models of remanence acquisition, *EUG*, Vienna, Austria.
- Reimann, C. Fabian, K., McEnroe, S. A. (2008) The magnetic signature of atmospheric dust influx along a transect through Oslo: terrestrial moss versus O-horizon soil samples *IGC*, OSLO, Norway.
- McEnroe, S. A., Fabian, K., Robinson, Peter and B. P. Burton (2007) Low temperature magnetic properties of the ilmenite-hematite system, *Eos Trans. AGU*.88(52), Fall Meet. Suppl., Abstract GP21B-0506.
- McEnroe, S. A., Robinson, P., Harrison, R. J., Langenhorst, F. & Carter-Stiglitz, B. (2007) Nature's engineering of nanoscale devices: From exchange bias in natural magnetic oxides to microstructural controls on crystal planetary anomalies (invited). *Abstracts and Proceedings, Geological Society of Norway, Stavanger 2007, Nr. 1, p. 60.*
- McEnroe, Suzanne A., Smelror, Morten and Stephanie C. Werner (2007) Mjøltnir core 7329/03-U-01: What do we know? What can we do? *Mjøltnir Workshop* (September 10th-13th), Svalbard, Norway.
- McEnroe, S. A., Boffa-Ballaran, T., Fabian, K., Robinson, P. and B. P. Burton (2007) Low temperature phase diagram for the ilmenite-rich side of the ilmenite-hematite solid solution, *EU workshop 2007, BGI*, Bayreuth, Germany.
- Kasama, T Asaka, R K K Chong, R E Dunin-Borkowski, E T Simpson, R J Harrison, U Golla-Schindler, S A McEnroe and A Putnis, Transmission electron microscopy of exsolution lamellae in ilmenite-hematite: Implications for "lamellar magnetism" *Magnetic Interactions Meeting, Cambridge*, 9-10 January 2007.
- McEnroe, S. A., Robinson, Peter, Harrison, R. J. and Fabian, Karl (2007) Effects of microstructures and nanoscale exsolution lamellae on magnetic memory in oxidized igneous and metamorphic rocks and on resultant crustal magnetic anomalies, *Frontiers in Mineral Sciences, Cambridge, UK*, p.179
- Fabian, K., McEnroe, S. A., Robinson, Peter, Harrison, R. J., (2007) Natural remanent magnetization in ilmeno-hematite induces exchange bias at low temperatures: A proof of lamellar magnetism, *Frontiers in Mineral Sciences, Cambridge, UK*, p.175
- Robinson, Peter, Fabian, K., McEnroe, S. A., Burton, B. Insights at ionic level into Low-T magnetic behavior of ferrian ilmenite solid solutions, *Frontiers in Mineral Sciences, Cambridge, UK*, p.175-176.
- Kasama, T., Asaka, T., Dunni-Borkowski, Harrison, R., Simpson, E. T., McEnroe, S. A., Putnis, A., (2007) Lorentz electron microscopy of exsolution lamellae in ilmenite-hematite, *Frontiers in Mineral Sciences, Cambridge, UK*, p.181.
- Fabian, K., Shcherbakov, V. P., McEnroe, S. and P. Robinson, A mean field model of the magnetic structure in hematite-ilmenite solid solutions and exsolved nanostructures of ilmenite and hematite, *EGU, Vienna*, Geophysical Research Abstracts, Vol. 9, 04932, 2007 SRef-ID: 1607-7962/gra/EGU2007-A-04932
- Fabian, K., Shcherbakov, V. P., McEnroe, S. and P. Robinson, A mechanism of exchange bias in nanoscale lamellar exsolution systems of paramagnetic ilmenite in antiferromagnetic hematite, *EGU, Vienna*, Geophysical Research Abstracts, Vol. 9, 04932, 2007 SRef-ID: 1607-7962/gra/EGU2007-A-0493
- Fabian, K., McEnroe, S. and P. Robinson, Lamellar magnetism carries the natural remanent magnetization in ilmenohematite from Modum, Norway, *EGU, Vienna* Geophysical Research Abstracts, Vol. 9, 04927, 2007 SRef-ID: 1607-7962/gra/EGU2007-A-04927

- Fabian, K. Reimann, C., and S. McEnroe, Magnetic properties of terrestrial moss samples (Hylocomium splendens) along a south-north profile crossing the city of Oslo, Norway *EGU, Vienna*, Geophysical Research Abstracts, Vol. 9, 04531, 2007 SRef-ID: 1607-7962/gra/EGU2007-A-04531.
- Fabian Karl, Suzanne McEnroe, Peter Robinson, Natural remanence carried by lamellar magnetism (2007) *IUGG, Perugia, Italy*.
- Fabian Karl, Clemens Reimann and Suzanne McEnroe; Environmental magnetism of the terrestrial moss Hylocomium splendens: Results from a south-north profile crossing the city of Oslo, Norway (2007) *IUGG, Perugia, Italy*
- Fabian, Karl, Valera P. Shcherbakov, Suzanne McEnroe, Peter Robinson; Low temperature exchange bias of nanoscale lamellar exsolutions of ilmenite in hematite, (2007) *IUGG, Perugia, Italy*.
- Shcherbakov, Valeriy, Fabian Karl, McEnroe Suzanne, Robinson Peter, A mean field model of the magnetic structure in hematite ilmenite solid solutions and exsolved nanostructures of ilmenite and hematite; (2007) *IUGG, Perugia, Italy*.
- McEnroe Suzanne, Laurie Brown, Peter Robinson, and Richard Harrison, Tracing the origin of remanent crustal magnetic anomalies to oxidized igneous and metamorphic rocks: magnetic minerals and microstructures (2007) *IUGG, Perugia, Italy*.
- Fabian, K., Reimann, C. and McEnroe, S., Magnetic properties of terrestrial moss samples (Hylocomium splendens) along a south-north profile crossing the city of Oslo, Norway. Det 16. nasjonale seminar om hydrogeology og miljøgeokjemi, NGU 7.-8. Feb. 2007. NGU Rapport 2007.003, p.62.
- Fabian, K., V. Shcherbakov, S. McEnroe, P. Robinson, (2007) Possible mechanisms of exchange bias in nanoscale ilmeno-hematite exsolution structures, p. 58, 1st *EuroMinSci Conference (26-29th March), La Coplle sur Loup, France*.
- McEnroe, S. A., Fabian, K., P. Robinson, Magnetic properties of oxides from a large remanence-dominated magnetic anomaly in south Australia: importance of intergrowths and implications for planetary magnetization, (2007) p.33. 1st *EuroMinSci Conference (26-29th March), La Coplle sur Loup, France*.
- Fabian, K., S. McEnroe, P. Robinson, (2007) Natural remanent magnetization in ilmenohematite from Modum, Norway: evidence for lamellar origin, p. 59, 1st *EuroMinSci Conference (26-29th March), La Coplle sur Loup, France*.
- McEnroe, Suzanne, Harrison, R. J., Robinson, P. T. Kasama, Schmidt, P. W., D. Clark and K. Fabian, (2007) Magnetic properties of oxides from a large remanence-dominated magnetic anomaly in south Australia: importance of intergrowths and implications for planetary magnetization, p. 33, 1st *EuroMinSci Conference (26-29th March), La Coplle sur Loup, France*.
- McEnroe, S. A., Robinson, P., Harrison, R. J., Langenhorst, F. & Carter-Stiglitz, B., 2007, Nature's engineering of nanoscale devices: From exchange bias in natural magnetic oxides to microstructural controls on crystal planetary anomalies. *Abstracts and Proceedings, Geological Society of Norway, Stavanger 2007, Nr. 1, p. 60*.
- Brown, L. B. and McEnroe, S. A., AGU (2006) Magnetic Properties of Anorthosites: Possible Source Rocks for Planetary Magnetic Anomalies, *Eos Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract GP11B-0080.

- Harrison, R. J., McEnroe, S. A., AGU (2006) Giant exchange bias in nanoscale ilmenite-hematite intergrowths: new insights through the application of atomistic Monte Carlo simulations, *Eos Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract GP31C-0099.
- McEnroe, S. A., K. Hemant, and J. R. Skilbrei (2006) Magnetic contributions of minerals at the surface and at depth in the crust: Comparing anomaly maps from aeromagnetic and satellite data from Scandinavia (Invited). *1st SWARM International Meeting, Nantes, France, ESA workshop*.
- McEnroe, S. A., Harrison, R. J., Carter-Stilzer, Robinson, P., (2006) Nature's engineering: Giant magnetic exchange bias > 1T in a natural mineral, *Eos Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract GP31C-0098.
- McEnroe, S. A., Robinson, P., S. A McEnroe, F. Langenhorst, G. D. Bromiley and M. P. Terry (2006) Mineral chemistry, and high and low-T magnetic properties after experiments at deep crustal conditions on Allard Lake hemo-ilmenite persisting magnetic moments related to nanoscale interfaces, New trends in, Palaeo, rock and environmental magnetism, *10th Castle meeting, Valtice, Czech*. p. 82, Travaux Geophysiques XXVII.
- McEnroe, S. A and J. R. Skilbrei, (2006) Magnetism in Proterozoic Crust: Rock Properties and Magnetic Response of Amphibolites and Pyroxene Granulites in Southwest Sweden *European Geosciences Union, Geophysical Research Abstracts*, Vol. 8, 06733. SRef-ID: 1607-7962/gra/EGU06-A-06733
- Robinson, P., S. A McEnroe, F. Langenhorst, M. P. Terry and C. Frandsen (2006) Chemistry, evolution and magnetic properties of hemo-ilmenite, Allard lake, Quebec: A case study for lamellar magnetism, New trends in, Palaeo, rock and environmental magnetism, *10th Castle meeting, Valtice, Czech*. p. 99, Travaux Geophysiques XXVII.
- Hirt, A. M., Schmidt, V., McEnroe, S. A., Heidelberg, F. and P. Robinson, (2006) Magnetic fabric in ilmenite rich norites of the Bjerkreimer-Sokndal Layered Intrusion, Norway, *11th symposium on Tectonics, structural geology and crystallography, Göttingen, Germany*.
- Harrison, Dunin-Borkowski, R E, Simpson, E T, Kasama, T, McEnroe, S A., Brown, L. B. and Hirt, A.M., American Geophysical Union, Fall meeting, (2005) Quantitative imaging of magnetic nanoparticles using off-axis electron holography, *Eos Trans. AGU*, 86 (52), Fall Meet. Suppl., Abstract, GP43B-01-invited.
- Brown, L. B., McEnroe, S. A. and Harrison, R. J. (2005) Rock-magnetic properties of samples from the El Laco magnetite “flow”, High Andes, Chile, *Eos Trans. AGU*, 86 (52), Fall Meet. Suppl., Abstract, GP41A-0856.
- Schmidt, P. W., McEnroe, S. A., Robinson, P. and Clark, D., (2005) Intergrowths in Multidomain hematite: Source of High NRM Intensities and Coercivity? *Eos Trans. AGU*, 86 (52), Fall Meet. Suppl., Abstract, GP41A-0865.
- Robinson, P., McEnroe, S. A., and Harrison, R. J., (2005) Lamellar magnetism: Ferrimagnetic effect of cation monolayers at interfaces of nanoscale exsolution lamellae, *Eos Trans. AGU*, 86 (52), Fall Meet. Suppl., Abstract, GP41A-0860.
- McEnroe, S. A., Hirt, A. M., Robinson, P., Harrison, R. J. and Brown, L. B. (2005) The effects of nanoscale exsolution on magnetic properties: insights from Forc diagrams, *Eos Trans. AGU*, 86 (52), Fall Meet. Suppl., Abstract, GP41A-0864.
- McCammon, C. A., McEnroe S. A. and Robinson, P. (2005) Applications of Mössbauer Spectroscopy to Lamellar Magnetism, *Eos Trans. AGU*, 86 (52), Fall Meet. Suppl., Abstract, GP43B-02-invited.

- Carter-Stiglitz, B., McEnroe, S. A. and Harrison (2005) Large exchange bias ($>1\text{T}$) between hematite and ilmenite, *International Association of Geomagnetism and Aeronomy, Toulouse, France*.
- McEnroe, S. A., Schmidt, P. W., Clark, D., Harrison, R. J. and Robinson, P. (2005) Magnetic properties of massive high-grade hematite deposits in southern Australia and comparisons to hematite in BIFs – Are either good analogues as a source of Martian anomalies? *International Association of Geomagnetism and Aeronomy, Toulouse, France*.
- Brown, L. L., McEnroe, S. A., Robinson, Peter, (2005) Remanent and induced magnetic anomalies over a layered intrusion: Effects of crystal fractionation and magma mixing *International Association of Geomagnetism and Aeronomy, Toulouse, France*.
- McCammon, C. A., McEnroe, S. A. and Peter Robinson, (2005) The nature of iron in ferrimagnetic nanolayers, International Mössbauer conference (*ICAME*) *France*.
- Brown, L. L., McEnroe, S. A., Robinson, Peter (2005) The effects of crystal fractionation and magma mixing on remanent and induced magnetic anomalies over a layered intrusion *Eos Trans. AGU*, 86 (18), Jt. Assem. Suppl., Abstract, GP12A-04.
- McEnroe, S. A., Carter-Stiglitz, B., Harrison, R. J., Hirt, A. M., Jackson M., and Robinson, P., (2005) Magnetic exchange bias in natural systems, *Nanomat-Birkeland Conference, Trondheim, Norway*.
- Robinson, P., McEnroe, S. A., Harrison, R. J., Langenhorst, F., Heidelbach F., and Hirt A. M., (2005) Lamellar magnetism: a ferrimagnetic interface substructure, *Nanomat-Birkeland Conference, Trondheim, Norway*.
- McCammon, C. A., McEnroe S.A., Robinson, P., The nature of iron in contact layers hematite-ilmenite: New insights into lamellar magnetism, 2005, *BGI, Germany*.
- McEnroe, S. A., Langenhorst, F., Robinson P. and Bromiley G., (2005) What is magnetic in the lower Crust? 100th Geological Society of Norway Meeting, Rorøs, Norway.
- McEnroe, S. A., J. R. Skilbrei, P. Robinson, F. Heidelbach, F. Langenhorst, and L. L. Brown (2005), Magnetic anomalies, layered intrusions and Mars, 100th Geological Society of Norway Meeting, Rorøs, Norway.
- McEnroe, S. A., Robinson P., Harrison, R. Langenhorst, F., (2004) Lamellar Magnetism: A New Magnetic Substructure? *Eos Trans. AGU*, 85 (47), Fall Meet. Suppl., Abstract, GP21C-02-invited
- Harrison, R. J. McEnroe, S. A. (2004) Magnetism and Microscopy: Applications to mineral magnetism at the nanometre scale, *Eos Trans. AGU*, 85 (47), Fall Meet. Suppl., Abstract, GP21C-01-invited.
- Hirt, A. M., Robinson, P. F. Heidelbach, McEnroe, S. A. (2004) Magnetic Anisotropy of Hemo-ilmenite Single Crystals: Testing the Lamellar Magnetism Hypothesis *Eos Trans. AGU*, 85 (47), Fall Meet. Suppl., Abstract, GP21A-0154.
- Morse, S. A., Ross, M. and McEnroe, S. A. (2004) Oriented exsolution of Fe-Ti oxides in augite from the Kiglapait Intrusion *Eos Trans. AGU*, 85 (47), Fall Meet. Suppl., Abstract, GP21B-0156-invited.
- McEnroe, S. A., Langenhorst, F., Harrison, R., Robinson P. and Bromiley G., (2004) Magnetic properties of the lower crust and upper mantle. Should remanence be considered? (Invited) *International Geologic Congress, Florence, Italy*.
- McEnroe, S. A., Harrison, R. Langenhorst, F., Jackson, M. Robinson P., Brown L. and K. Takeshi (2004) Exploring effects of nanoscale exsolution on magnetic properties in the hematite-ilmenite series, *Goldschmidt Conference, Copenhagen, Denmark*.

- Robinson, P., Harrison, R. J., McEnroe, S. A., Langenhorst, F. and Heidelbach, F., (2004) Phase relations in the hematite-ilmenite series: Crucial in acquiring and preserving crustal magnetism, *Goldschmidt Conference, Copenhagen, Denmark*.
- McEnroe, S. A. Langenhorst, F., Robinson P., Bromiley G., (2004) What is magnetic in the lower crust? *EGS, Nice, France*.
- McEnroe, S. A., From Rogaland to Mars: minerals that remember, (2004), Physics seminar, *NTNU, Trondheim, Norway*.
- McEnroe, S. A. (2004) Understanding magnetic remanence in ilmenite-bearing norites: The Heskestad magnetic anomaly of the Bjerkreim-Sokndal layered intrusion, *Nordic Geological Winter Meeting, Uppsala, Sweden*.
- Harrison, R. J., S. A. McEnroe, U. Golla and U. Becker (2004) The Origin of Stable Remanent Magnetization in Exsolved Titanohematite: Insights Through the Application of Neutron Diffraction, Transmission Electron Microscopy, Electron Energy Loss Spectroscopy, and Monte Carlo Simulations, *European Geosciences Union*.
- McEnroe, S. A. (2003) Induced versus remanent magnetic signatures of aging rocks and minerals: Earth analogues for Martian anomalies, Earth and planetary Science Seminar Series, Macquarie University, New South Wales, Australia.
- McEnroe, S. A., Langenhorst, F., and P. Robinson (2003) Back to Basics: Allard Lake to Mars, (A tribute to Robert Hargraves), *Eos Trans. AGU*, 84 (46) Fall Meet. Suppl., (2003) Abs. GP31C-0763.
- Robinson, P., McEnroe, S. A. and R. Harrison (2003) Robert Hargraves and the external force of lamellar magnetism: A tribute to Robert Hargraves *AGU, San Francisco Fall meeting*.
- Brown, L. L., McEnroe, S. A. and M. Jercinovic (2003) Paleomagnetism and monazite dating of Grenville Rocks, Adirondack Mountains, NY, *AGU, San Francisco Fall meeting*.
- McEnroe, S. A., Clark, D. and P. Schmidt (2003) Magnetic properties and magnetic signature of a massive hematite deposit, *European Geophysical Society, XXVIII General Assembly, Nice, France*, Geophysical Res. Abs., v. 5, 01260.
- Harrison, R. J., McEnroe, S. A., and Robinson, P. (2002) Lamellar magnetism: A source of unusually strong and stable magnetization on the Earth and other planets? *AGU, Baltimore Spring meeting*.
- McEnroe, S. A. and Brown, L. (2002) Earth analog for Martian magnetic anomalies. *European Geophysical Society, XXVII General Assembly, Nice, France*.
- Harrison, R.J., McEnroe, S. A., Golla, U. and Becker, U. (2001) The origin of stable remanent magnetization in exsolved titanohematite: Insights through the application of neutron diffraction, transmission electron microscopy, electron energy loss spectroscopy, and monte carlo simulations. *European Union of Geosciences XI*, April 8th–12th, 2001, J. Conference Abstracts, 6, 701.
- McEnroe, S. A., Brown, L. B. and Robinson, P. (2001) Earth analog for Martian magnetic anomalies: Remanence properties of ilmenite norites, 264, *IAGA, Hanoi*.
- McEnroe, S. A., Harrison, R., Robinson, P., Dyar, D., and Brown, L. B. (2001) Effects of slow cooling on exsolution microtextures and consequent magnetic properties of the hematite-ilmenite series, *European Geophysical Society*.
- McEnroe, S. A., Harrison, R., Robinson, P. Dyar, D. (2001) Chemical and magnetic properties of hematite produced by phase separation from hematite-ilmenite solid solution during slow cooling. *European Union of Geosciences XI*, April 8th–12th, 2001, J. Conference Abstracts.

- Robinson, P. Robins, B., Kullerud, K., Tegner, C. and McEnroe, S. A. (2001) Formation of ilmenite-rich cumulates by magma mixing: Comparisons of the mineral chemistry of the layered series of the Bjerkreim-Sokndal intrusion and the Tellnes ilmenite norite, Norway. *European Union of Geosciences XI*, April 8th–12th, 2001, Conference Abs.
- McEnroe S. A., Robinson P and Panish P.T. (2001) Aeromagnetic anomalies, magnetic petrology and rock magnetism of hemo-ilmenite- and magnetite-rich cumulates from the Sokndal region, South Rogaland, Norway, in Korneliussen, A. (ed.), *GEODE field workshop on ilmenite deposits in the Rogaland anorthosite province, S. Norway*. NGU Report, 2001.042, 84.
- Brown, L. B., McEnroe, S. A. and Smethurst, M. A. (2001) Paleomagnetism of the Egersund-Ogna anorthosite, Rogaland, Norway, and the position of Fennoscandia in the late Proterozoic. *European Geophysical Society, Nice, France*
- Brown, L. B., McEnroe, S. A. and Smethurst, M. A. (2001) The Position of Fennoscandia in the Late Proterozoic: Paleomagnetic Data from the Egersund-Ogna Anorthosite, Rogaland, Norway, *Eos. Trans. AGU*, 82(20), Spring Meet. Suppl., Abstract GP31A-01, 2001, Boston, MA, USA.
- Brown L, McEnroe S. A. and Smethurst M. (2001) Tectonic setting of the Egersund-Ogna anorthosite, Rogaland, Norway, and the position of Fennoscandia in the Late Proterozoic, in Korneliussen, A. (ed.), *GEODE field workshop on ilmenite deposits in the Rogaland anorthosite province, S. Norway*. NGU Report, 2001.042, 20-21.
- McEnroe, S. A., Peter Robinson, Cliff Shaw and Falko Langenhorst (2001) Exploration of Crustal Magnetism in the Ilmenite-Hematite System. *From Crust to Core, Verbania, Italy, T2-3 (Bayerisches Forschungsinstitut für Experimental Geochemie und Geophysik Universität*.
- Smethurst, M. A. and McEnroe, S. A. (2001) The palaeolatitude controversy in the Silurian of Newfoundland resolved: new palaeomagnetic results from the central mobile belt. *EGS*.
- McEnroe, S., Heldal, T., Beard, L., Tegner, C., Kjølle, I., Dyar, D., Delaney, J., and Sutton, S. (2000) Geophysical mapping and petrophysical-mineralogical interpretation of the Larvikite-lardalite complex, Oslo igneous province, Norway. *EGS, Nice, France*.
- McEnroe S.A. and Brown, L.L. (2000) Remanence-dominated anomalies: Mineralogical and rock-magnetic contributions. *Geonystt*, 1, 117-118.
- McEnroe, S. A. and Robinson, P. (2000) Magnetic petrology in ilmenite exploration, *Geonystt*. 1, 118.
- Olesen, O., Beard, L., McEnroe, S. A., Smethurst, M.A., Torsvik, T., Bidstrup, T., & Egeland B. (2000) A Sveconorwegian age for the 'Permian' Skagerrak and Silkeborg intrusions beneath the Norwegian-Danish Basin. *Geonystt*. 1, 130.
- Heldal, T., Tegner, C., McEnroe, S. A., Kjølle, I., and Beard, L. (2000) New geological and geophysical mapping of the Larvikite-Lardalite complex, Oslo igneous province, Norway. *Geonystt*, 1, 82.
- McEnroe, S. A. (1999) Interpreting the aeromagnetic signature of ilmenite deposits in Rogaland, Norway: The importance of petrophysical measurements and rock-magnetic properties. *IUGG*, 1, 388.
- McEnroe, S. A., Brown, L.L., and Panish, P. T. (1999) A matter of scale: From crystal chemistry to aeromagnetic anomalies: the Peter Robinson way. *AGU Spring Meeting*, EOS Transactions, 80, S363 (Invited).

- Brown, L. L., and McEnroe, S. A. (1999) Titanohematite as the carrier in Remanence-dominated magnetic anomalies: rock-magnetic and petrographic studies of the Russell belt sillimanite gneiss, Adirondacks, New York, USA. *IUGG*, 1, 387.
- Dyar, M., Polyak, D., Delaney, J., Sutton, S., McEnroe, S. A., Tegner, C. (1999) Microanalysis of ferric iron in feldspar. *GSA*, Annual Meeting, 31, A358.
- Mørk, M.E., McEnroe, S. A. and Olesen, O. (1999) Magnetic properties of Mesozoic sediments off Mid Norway - distribution and origin. *EAGE*, Helsinki.
- McEnroe, S. A. and Robinson, Peter (1998) Correlation between oxide mineralogy, rock-magnetic properties and aeromagnetic anomalies: Case study from the Sokndal region, South Norway. *AGU Meeting*, EOS, 79, 17.
- Brown, L., and McEnroe, S A. (1998) Balsley and Buddington Revisited: Rock magnetic and petrographic studies of microcline gneiss causing remanence-controlled negative aeromagnetic anomalies, Adirondack Mountains, USA. *AGU Meeting*, EOS, 79, 17.
- McEnroe, S. A., Robinson, P., Rønning S.R. and Panish P. T. (1997) The interplay between oxide mineralogy and remanence, and its effect on aeromagnetic anomalies, *International Association of Geomagnetism and Aeronomy, Uppsala, Sweden*, 79.
- McEnroe, S., Torsvik, T and Brown, L. (1997) New paleomagnetic data linking Laurentia and Baltica in the Mid-Proterozoic. in COPENA Proceedings. NGU Report 97.131.
- McEnroe, S. A. and Torsvik, T. (1997) Mesozoic North America: How can it help Europe? *Geonytt*, 24, 66.
- McEnroe, S. A. and Brown, L.L. (1997) Remanence-controlled negative magnetic anomalies in the Adirondack Mountains, USA: Balsey and Buddington revisited. Abstract, *International Association of Geomagnetism and Aeronomy, Uppsala, Sweden*, 80.
- McEnroe, S. A. and Brown L. L. (1997) Paleomagnetism and rock-magnetic behavior of Grenvillian granulite rocks, Adirondack Mountains, New York. EOS, Transactions of the *American Geophysical Union, San Fransico*.
- McEnroe, S. A. and Torsvik, T. (1997) Testing Grenvillian-Sveconorwegian links between Laurentia and Baltica. *Terra Nova*, 9, 356. *EUG* 9, Strasbourg, France.
- Skilbrei, J. R., Sindre, A., Kihle, O., McEnroe, S. A. (1996) Combined interpretation of potential field-, petrophysical data and topography from central Norway and the continental shelf, 58th EAGE conference, Amsterdam, Netherlands.
- McEnroe, S. A. (1995) Paleomagnetic signatures and rock magnetic properties from rapidly uplifted high-pressure metamorphic rocks and intrusive igneous rocks in Sveconorwegian Orogen, Sweden. *Geonytt*, 22, 48.
- McEnroe, S. A. (1995) Titanohematite-rich granulites and amphibolites from the Sveconorwegian Orogen, Sweden: Implications for aeromagnetic studies. *J. Applied Geophysics*, 34, 145.
- McEnroe, S. A. and Robinson, Peter (1995) Constraining uplift history and late tectonic rotations by paleomagnetism: studies from high-pressure metamorphic rocks, Sveconorwegian Orogen, Sweden and the Western Gneiss Region, Scandian Orogen, Norway. *Terra Nova. EUG, Strasbourg France*.
- McEnroe, S. A. (1994) Does the changing chemistry of Mesozoic mafic dikes from Connecticut to Maine reflect changing mantle conditions? *Geological Society of America*, Abstracts with Programs, Northeastern Meeting.
- McEnroe, S. A., Bylund, G., Johansson, L., and Moller, C. (1994) Acquisition of paleomagnetic signatures from rapidly uplifted, high-pressure metamorphic rocks and

- intrusive igneous rocks in the Sveconorwegian Orogen, Sweden: EOS, Transactions, *American Geophysical Union*, 75, 127.
- McEnroe, S. A. and Brown, L.L. (1992) Implications for the Mesozoic APW for North America from intrusions and sedimentary rocks in New England. EOS, 73, 95.
- McEnroe, S. A. and Hermes, O. D. (1991) Paleomagnetic evidence for a Late Triassic - Early Jurassic age of dolerite dikes from western Rhode Island. Geological Society of America Abstracts with Programs, 23, 100.
- McEnroe, S. A. (1991) The Newark Trend I and II pole positions: Are they valid early Jurassic pole positions for North America? Geological Society of America Abstracts, 23, A317.
- McEnroe, S. A. (1991) Constructing a Mesozoic polar wander path for North America based on paleomagnetic data from intrusions in southern, New England (extended abstract): Northeast Paleomagnetic Workshop, 5th Annual Meeting, Toronto, Ontario.
- McEnroe, S. A. and Brown, L.L. (1990) Jurassic - Cretaceous Apparent Polar Wander Path for North America: A new configuration based on intrusions and sedimentary rocks from southern New England, *AGU*, EOS, 71, 489.
- McEnroe, S. A. (1989) Revaluation of the Newark I and II pole positions for North America (extended abstract): Northeast Paleomagnetic Workshop, 3rd Annual Meeting, Amherst, MA.
- McEnroe, S. A. (1988) Diversity in paleomagnetism, geochemistry and age in Mesozoic diabase intrusions, central Massachusetts: *Geological Society of America* Abstracts with Programs, 20, 55.
- McEnroe, S. A. and Brown, L.L. (1988) Paleomagnetism of Mesozoic diabase intrusions and redbeds in central Massachusetts: Relations to the APWP for North America. *Geological Society of America Abstracts*, 20, A351.
- McEnroe, S. A. and Brown, L.L. (1987) Paleomagnetism of diabase dikes and sills intruding pre-Mesozoic basement rocks near and east of the Connecticut Valley Mesozoic basins, west-central Massachusetts, *AGU*, EOS, 68, 295.
- McEnroe, S. A., Robinson, Peter, Brown, L.L. and Foland, K.A. (1987) Paleomagnetic discovery of Cretaceous diabase dikes in central Massachusetts. *Geological Society of America* Abstracts, 19, 765.