

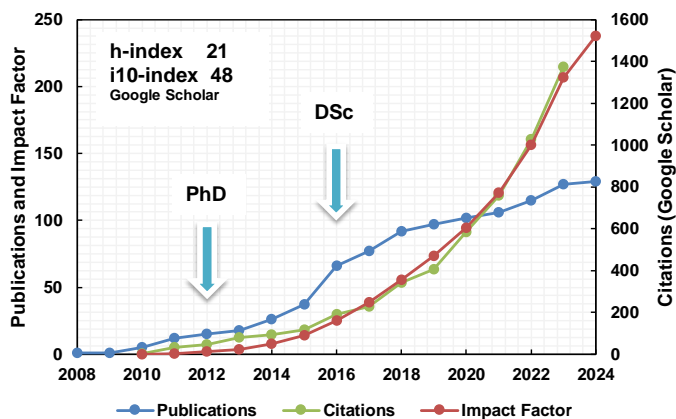
Curriculum Vitae

Przemyslaw B. KOWALCZUK (Pshem)

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I am an (co)author of more than 100 publications in peer-refereed international scientific journals, conference proceedings, invited book chapters, and scientific/industrial reports. I have been extensively working on mineral processing and extractive metallurgy with special focus on processing of marine (deep-sea) minerals, rare earth elements (REE), and secondary resources. The results from my innovative and interdisciplinary works have been published in various high-quality journals in the areas of mineral processing, chemistry, engineering, and chemical engineering. For the scientific achievements I received many awards, including, in 2014, a prestigious fellowship for the Best Young Researchers received from the Polish Ministry of Science and Higher Education, and two fellowships for the Best Young Researchers START2013 and START2014, from the Foundation of Polish Science (FNP). In 2016, I was awarded a Doctor of Science degree (DSc, *habilitation*) for contributions to the scientific literature. In 2017, I was recognized as a *Rising Star* in mineral processing and metallurgy, by Minerals Engineering International (MEI Online) – the largest source of information on mineral processing & extractive metallurgy. Faculty of Applied Science, University of Liege in Belgium awarded me as the honorary collaborator for the academic years of 2019-2024. In 2024 I was selected for the Outstanding Academic Fellows Programme (OAFP) at NTNU.



Education	
Oct 2016	DSc (habilitation), Mining & Geological Engineering Wroclaw University of Science and Technology, Poland Faculty of Geoengineering, Mining and Geology title: <i>Physicochemical aspects of flotation of naturally hydrophobic substances</i>
May 2012	PhD (Hons.), Mining & Geological Engineering specialization: <i>materials science, minerals engineering, physicochemistry of surfaces</i> Wroclaw University of Technology, Poland Faculty of Geoengineering, Mining and Geology thesis: <i>Theoretical and experimental determination of the maximum size of floating particles in different flotation cells</i> Supervisor: Prof. Jan Drzymala
May 2008	MSc, Materials Engineering specialization: <i>chemical metallurgy and corrosion of metals</i> Wroclaw University of Technology, Poland Faculty of Fundamental Problems of Technology thesis: <i>Chemical and mineralogical changes in non-oxidative and atmospheric leaching of copper ore shale fraction</i> Supervisor: Prof. Tomasz Chmielewski
Research experience	

<i>Sep 2021–now</i>	Professor in minerals engineering NTNU Norwegian University of Science and Technology, Norway Department of Geoscience and Petroleum
<i>June 2021–now</i>	Guest Professor Central South University, China School of Minerals Processing & Bioengineering
<i>Mar 2021– Aug 2021</i>	Adjunct Associate Professor NTNU Norwegian University of Science and Technology, Norway Department of Geoscience and Petroleum
<i>Jan 2021–Aug 2021</i>	Deputy Head of Department of Analytical Chemistry and Chemical Metallurgy Wroclaw University of Science and Technology, Poland
<i>Oct 2020–Aug 2021</i>	Associate Professor Wroclaw University of Science and Technology, Poland Department of Analytical Chemistry and Chemical Metallurgy
<i>Mar 2017–Feb 2021</i>	Postdoctoral Researcher in mineral processing NTNU Norwegian University of Science and Technology, Norway Department of Geoscience and Petroleum
<i>Oct 2018–Dec 2018</i>	Guest Lecturer/Researcher for the course Mineral Processing (EMerald Master Programme) University of Liege, Belgium Faculty of Applied Science
<i>Nov 2016–Feb 2019</i>	Associate Professor in minerals engineering and materials science Wroclaw University of Science and Technology, Poland Faculty of Geoengineering, Mining and Geology
<i>Nov 2015–Oct 2016</i>	Vice-head of Division of Mineral Processing Wroclaw University of Science and Technology, Poland Faculty of Geoengineering, Mining and Geology
<i>Oct 2012–Oct 2016</i>	Assistant Professor in minerals engineering and materials science Wroclaw University of Science and Technology, Poland Division of Mineral Processing
<i>Oct 2013–Dec 2013</i>	Visiting Scholar Stanford University, USA Stanford Center for Professional Development
<i>Feb 2012–Sep 2012</i>	Research Assistant University of Exeter, UK Camborne School of Mines
<i>Oct 2008–Jan 2012</i>	Academic Teaching Wroclaw University of Technology, Poland Faculty of Geoengineering, Mining and Geology
<i>Feb 2008–Sep 2008</i>	Chemist Wroclaw University of Technology, Poland Institute of Mining Engineering
<i>Jun 2007–Oct 2007</i>	Laboratory Technician Wroclaw University of Technology, Poland Faculty of Chemistry

Projects

<i>Sep 2023– Sep 2027</i>	<i>HolE-LIB – Developing a Holistic Ecosystem for Sustainable Repurposing and/or Recycling of Lithium-ion Batteries (LIBs) in Norway and the EU, funded by NTNU Interdisciplinary Sustainable, PhD supervisor</i>
<i>Jul 2023– Jul 2026</i>	<i>Development of smart collectors for mineral and metal extraction, PhD funded by NTNU Faculty of Engineering, PhD supervisor</i>
<i>Jun 2023– Dec 2026</i>	<i>REEsilience - Sustainable production of Rare Earth Elements and other products from the Fen Carbonatite Complex, co-funded by The Research Council of Norway, Project leader at NTNU, Researcher supervisor</i>
<i>Feb 2023– Dec 2025</i>	<i>EMINENT - Energy MINerals for the NEtzero Transition, co-funded by The Research Council of Norway, Project co-leader at NTNU, PostDoc supervisor</i>

Sep 2022– Dec 2025	RareGreen - Sustainable processing methods for rare earth elements, EIT Raw Materials, funded by European Union, Project leader at NTNU, PhD supervisor
Jan 2022– Oct 2025	Askepott - Utilization of the value creation potential in fly ash and waste acid, IPN, funded by The Research Council of Norway, WP Leader, PostDoc supervisor, PhD co-supervisor
Jun 2021– Oct 2025	HARARE - Hydrogen as the reducing agent in the recovery of metals and minerals from metallurgical waste, Horizon2020, funded by European Union, Tasks Leader, PostDoc supervisor, PhD co-supervisor
Jan 2021– Mar 2024	RFC-upscaling - New Reflux flotation cell technology upscaling for ore flotation, EIT Raw Materials, funded by European Union, Project leader at NTNU, PhD supervisor
Jan 2020– Dec 2022	DSM-School - EIT International Summer School "From Dredging to Deep-Sea Mining", EIT Raw Materials, funded by European Union, Project leader at NTNU
Jan 2018– Mar 2021	CEE SIMP - Doctoral course for Circular Economy Entrepreneurship in System Integrated Metals Processing, funded by KIC Raw Materials, Project leader at NTNU
Mar 2017– Feb 2019	MarMine - Exploitation technologies for marine minerals on the extended Norwegian continental shelf, financed by the Research Council of Norway, Co-investigator (postdoctoral researcher at NTNU)
Jul 2013–Dec 2016	The mechanism of formation and rupture of the three-phase contact in different flotation devices, financed by Polish National Science Centre, Principal investigator
May 2011–May 2012	Theoretical and experimental determination of maximum size of floating particles in different flotation cells, financed by Polish National Science Centre, Co-investigator (PhD grant)
Jan 2010–Dec 2013	Hydrometallurgical technology of copper sub-products and concentrate treatment, financed by Polish National Centre for Research and Development, Co-investigator
Jun 2007–Oct 2007	Search for a sustainable way of exploiting, black shale ores using biotechnologies Project Bioshale (European project contract NMP2-CT-2004 505710), financed by European Commission under the Sixth Framework Programme for Research and Development, Co-investigator

Awards & prizes

2024-2028	Award: Outstanding Academic Fellows Programme (OAFP), NTNU, Norway
2021-2024	Honorary collaborator for the academic years of 2021-2024, University of Liege, Belgium
Jul 2021	Award: Primus, Wroclaw University of Science and Technology, Poland
Dec 2019	Honorary collaborator for the academic year of 2019-2020, University of Liege, Belgium
Sep 2016	Doctoral Dissertation Award, Wroclaw University of Science and Technology, Poland
Sep 2016	Award: Rector of the Wroclaw University of Science and Technology, Poland
Oct 2014– Sep 2017	Fellowship for the Best Young Researchers financed by the Polish Ministry of Science and Higher Education, Poland
Apr 2014	Fellowship for the best young researchers START 2014 financed by the Foundation of Polish Science (FNP)
Oct 2013	Award: Rector of the Wroclaw University of Technology, Poland
Sep 2013	Award: The best poster, Mineral Engineering Conference MEC2013, September 16-19, 2013, Swieradow-Zdroj
Jun 2013–Dec 2016	Grant: Polish Research Grant SONATA "The mechanism of formation and rupture of the three-phase contact in different flotation devices" financed by the National Science Centre
Apr 2013	Fellowship for the best young researchers START 2013 financed by the Foundation of Polish Science (FNP)
Oct 2012– July 2015	Fellowships co-financed by the European Union within the European Social Fund, Mloda Kadra 2015 plus
Oct 2011	Award: Rector of the Wroclaw University of Technology, Poland
May 2011	Award: The best presentation on the XI th PhD Students and Young Researchers Scientific Conference, Interdisciplinary Topics in Mining and Geology, May 18-21, 2011, Szklarska Poreba
May 2011–May 2012	Grant: Polish Research Grant "Theoretical and experimental determination of maximum size of floating particles in different flotation cells" financed by the National Science Centre
Oct 2010–Sep 2011	Fellowships co-financed by the European Union within the European Social Fund, Mloda Kadra 2015

Skills & Activities

Membership

Scientific Committee of the *III Polish Mining Congress*, September 14-16, 2015, Wrocław, Poland

Scientific Committee of *Mineral Engineering Conference MEC*, Poland (2013–until now)

Advisory Committee of *2nd International Electronic Conference on Mineral Science*, sponsored by Minerals MDPI, March 1-15, 2021.

Scientific Committee of *International Mineral Processing and Recycling Conference (IMPRC)*, Serbia (2019–until now)

Scientific Committee of the *Conference of PhD Students and Young Scientists*, Poland (2019–now)

Scientific Committee of the *1st International Symposium on Earth and Geosciences, ISEAG 2020*, Istanbul, Turkey

Top500 Innovators (2013–until now)

Polish Mineral Engineering Society (2010–until now)

Mineral Engineering Conference Council (MEC Council) (2015-2018)

Society for Mining, Metallurgy & Exploration (SME) (2022–until now)

Reviewer

Outstanding and recognized reviewer of many journals

Scientific and development grants: National Centre for Research and Development (NCBiR), Poland; National Science Centre, Poland; Foundation of Polish Science, Poland; National Commission for Scientific and Technological Research, Chile; Mitacs Accelerate, Canada; Natural Sciences and Engineering Research Council (NSERC), Canada

Tenure Review Panel: Assistant Professor position at University of Engineering & Technology, Pakistan

Nominated assessor for academic promotion at Curtin University, Australia

Examination of master's dissertation: University of Cape Town, South Africa; Wrocław University of Science and Technology, Poland

PhD Assessor: TU Bergakademie Freiberg (Germany), Aalto University (Finland)

Editor

Editor-in-Chief (since 2016); Editor (2012-2016) of *Physicochemical Problems of Mineral Processing* (IF 1.5)

Editor (since 2017) of *Minerals*; Guest Editor of “Selected Papers from the 2nd International Conference of Young Scholars in Mineral Processing”; “Surfactants at Interfaces and Thin Liquid Films”; “Selected Papers from the 3rd International Conference of Young Scholars in Mineral Processing”

Editor (since 2021); Guest Editor (2019) of *Frontiers in Chemistry* and *Frontiers in Physics*

Guest Editor (2019) of Special Issue on Flotation in Honour of Professor Jan Drzymala, for his 70th Birthday in *Mineral Processing and Extractive Metallurgy Review*.

Deputy Editor-in-Chief (since 2012) of *Inżynieria Mineralna, Journal of the Polish Mineral Engineering Society*

Editor (since 2013) of *Current Chemistry Letters*

Associate Editor (since 2017) of *The Open Chemical Engineering Journal*

Advisory Editorial Board (since 2018) of *Sci*

Editorial Committee Member (since 2021) of *Journal of Central South University*

Co-Editor: *E3S Web of Conferences*, Volume 8 (2016), Mineral Engineering Conference MEC2016, ISSN 2267-1242

Co-Editor: *Proceedings of the III Polish Mining Congress*, September 14-15, 2015, Wrocław, Poland

Co-Editor of three monographs: *Łupki miedzionośny (Copper-bearing shale)* Part 1: ISBN 978-83-937788-6-7 (2014); Part 2: ISBN 978-83-942205-1-8 (2016); Part 3: ISBN 978-83-946706-0-3 (2017)

Editor: *Proceedings of the Mineral Engineering Conference MEC2013*, ISBN 978-83-937788-2-9

Conference session chairman

27th International Mining Congress and Exhibition of Turkey IMCET 2022, 22.25.03.2022, Antalya, Turkey

Flotation '17, 13-16.11.2017, Cape Town, South Africa

International Mineral Processing Congress, IMPC 2018, 17-21.09.2018, Moscow, Russia

	Mineral Engineering Conference, MEC2018, 26-29.09.2018, Zawiercie, Poland
	Physical Separation '19, 13-14.06.2019, Falmouth, UK
Organisation of conferences	Mineral Engineering Conference MEC2016, Swieradow-Zdroj, Poland, September 25-28, 2016, vice-chairman
	Mineral Engineering Conference MEC2013, Swieradow-Zdroj, Poland, September 16-19, 2013, conference secretary
	Students and Young Researchers Scientific Conference, Interdisciplinary Topics in Mining and Geology, Szklarska Poreba, Poland, 2009, 2010, 2011, co-organizer
Teaching, supervising	Lectures: Mineral Processing, Metallurgy, Environmental Protection in Mining; Hydrometallurgy; Laboratories: Mineral Processing, Chemistry, Flotation, Hydrometallurgy, Mineral Processing Design and Optimization, Mineral Processing (EMerald); Metallic Materials and Metallurgical Processes; Basics of Inorganic Chemistry; Basics of Chemical Metallurgy and Corrosion
	Supervision of completed BSc (25) and MSc (10) theses at the Wroclaw University of Science and Technology and LLP/Erasmus (Federation of European Mineral Programs); co-Supervisor of one completed PhD theses at the Camborne School of Mines (University of Exeter, UK), and three ongoing at Norwegian University of Science and Technology (Norway), and Wroclaw University of Science and Technology (Poland); supervisor of postdoctoral researcher at NTNU
Invited speech/lectures	Keynote at 1 st Chinese Mineral Processing Congress, September 22-24, 2017, Changsha, China
	Invited lecture at Central South University, Department of Mineral Processing, September 2017, Changsha, China
	Keynote at 2 nd International Conference of Young Scholars in Mineral Processing, August 21-23, 2018, Changchun, China
	Keynote at Thematic workshop In the Black\Deep Sea mining challenges, July 5-6, 2018, Porto, Portugal
	Keynote at International Mineral Processing Congress IMPC 2018, September 15-21, 2018, Moscow, Russia
	Keynote at 3 rd International Conference of Young Scholars in Mineral Processing, April 26-28, 2019, Mianyang, China
	Invited lecture at Wroclaw University of Environmental and Life Sciences, Faculty of Biotechnology and Food Sciences, January 9, 2023, Wroclaw Poland.
	Keynote at XXIII Conference of PhD students and young scientists, Interdisciplinary topics in mining, geology and geomatics, 13-15 June 2023 Wroclaw, Poland.
Languages	Polish (native), English (proficient), Norwegian (intermediate)

List of selected papers in peer-reviewed journals

- Kruszelnicki M., Polowczyk I., **Kowalczyk P.B.**, 2024. Insight into the influence of surface wettability on flotation properties of solid particles - critical contact angle in flotation. Powder Technol. 431, 119056.
- Guner M.K., Hassanzadeh A., Vinnett L., Yianatos J., **Kowalczyk P.B.**, 2023. Effects of operating parameters on residence time distribution in a REFLUX flotation cell. Miner. Eng. 204, 108439.
- Kar M., K., Hassanzadeh A., van der Eijk, C., **Kowalczyk P.B.**, Aasly K., Safarian J., 2023. Properties of self-hardened CaO-added bauxite residue pellets, and their behavior in hydrogen reduction followed by leaching and magnetic separation for iron and alumina recovery. Int. J. Hydrog. Energy (doi: 10.1016/j.ijhydene.2023.09.212).
- Kruszelnicki M., **Kowalczyk P.B.**, Polowczyk I., 2023. Three-phase contact formation between an air bubble and solid surfaces with different hydrophobicity degrees in liquid. Colloids and Surfaces A: Physicochem. Eng. Aspects, 676, Part A, 132067.
- Silva C.M., Lode S., Aasly K., **Kowalczyk P.B.**, 2023. Early-stage application of process mineralogy methodologies for mineral tracking in flotation of rare earth elements (REE)-bearing minerals from a deposit in Norway. Miner. Eng., 202, 108268.
- Borkowski M., Batys P., Demchuk O., **Kowalczyk P.B.**, Zawala J., 2023. Amino-acids surfactants and n-octanol mixtures – sustainable, efficient, and dynamically-triggered foaming systems. Ind. Eng. Chem. Res. 62, 13498-13509.

- Kosior D., Wiertel-Pochopien A., **Kowalczyk P.B.**, Zawala J., 2023. Bubble formation and motion in liquids - a review. Minerals 13(9), 1130.
- Jing G., Meng X., Chen J., Sun W., **Kowalczyk P.B.**, Gao Z., 2023. Electrocoagulation in a packed aluminium scraps anode reactor for mineral processing wastewater treatment. Miner. Eng., 202, 108231.
- Khoshdast H., Hassanzadeh A., **Kowalczyk P.B.**, Farokhpay S., 2022. Characterization techniques of flotation frothers - A review. Miner. Process. Extr. Met. Review 44(2), 77-101.
- Jing G., Meng X., Sun W., **Kowalczyk P.B.**, Gao Z., 2023. Recent advances in treatment and recycling of mineral processing wastewater. Environ. Sci.: Water Res. Technol., 9, 1290-1304.
- Hassanzadeh A., Kar M.K., Safarian J., **Kowalczyk P.B.**, 2023. An investigation on reduction of calcium added bauxite residue pellets by hydrogen and iron recovery through physical separation methods. Metals, 13(5), 946.
- Hassanzadeh A., Pilla G., Kar M.K., **Kowalczyk P.B.**, 2023. An invitation on characterization of H₂-reduced bauxite residue and recovering iron through wet magnetic separation processes. Minerals, 13(6), 728
- Hassanzadeh A., Safari M., Khoshdast H., Güner MK., Hoang D.H., Sambrook T., **Kowalczyk P.B.**, 2022. Introducing key advantages of intensified flotation cells over conventionally used mechanical and column cells. Physicochem. Probl. Miner. Process. 58(5), 155101.
- Nazari S., Zhou S., Hassanzadeh A., Li J., He Y., Bu X., Kowalczyk P.B., 2022. Influence of operating parameters on nanobubble-assisted flotation of graphite. J. Mater. Res. Technol. 20, 3891-3904.
- Nazari S., Hassanzadeh A., He Y., Khoshdast H., **Kowalczyk P.B.**, 2022. Recent developments in generation, detection and application of nanobubbles in flotation. Minerals 12(4), 462.
- Hassanzadeh A., Safari M., Hoang D.H., Khoshdast H., Albijanic B., **Kowalczyk P.B.**, 2022. Technological assessments on recent developments in fine and coarse particle flotation systems. Miner. Eng. 180, 107509.
- Kruszelnicki M., Hassanzadeh A., Legawiec K.J., Polowczyk I., **Kowalczyk P.B.**, 2022. Effect of ultrasound pre-treatment on carbonaceous copper-bearing shale flotation. Ultrason. Sonochem. 84, 105962.
- Witecki K., Polowczyk I., **Kowalczyk P.B.**, 2022. Chemistry of wastewater circuits in mineral processing industry – a review. J. Water Process. Eng. 45, 102509.
- Kruszelnicki M., Polowczyk I., **Kowalczyk P.B.**, 2022. Control of glass surface wettability via esterification with n-alkyl alcohols. Physicochem. Probl. Miner. Process. 58(2), 145147.
- Matos V.E., Nogueira S.C.S., **Kowalczyk P.B.**, Silva G.R., Peres A.E.C., 2022. Differences in etheramine froth properties and the effects on iron ore flotation. Part 1: Two-phase system. Miner. Process. Extr. Met. Review. 43(2), 209-216.
- Matos V.E., Nogueira S.C.S., Silva G.R., **Kowalczyk P.B.**, Peres A.E.C., 2022. Differences in etheramine froth properties and the effects on iron ore flotation. Part 2: Three-phase system. Miner. Process. Extr. Met. Review. 43(2), 243-250.
- Ochromowicz K., Aasly K., **Kowalczyk P.B.**, 2021. Recent advancements in metallurgical processing of marine minerals. Minerals 11(12), 1437.
- Jing G., Ren S., Pooley S., Sun W., **Kowalczyk P.B.**, Gao Z., 2021. Electrocoagulation for industrial wastewater treatment: An updated review. Environ. Sci.: Water Res. Technol. 7, 1177-1196.
- Gao Z., Wang C., Sun W., Gao Y., **Kowalczyk P.B.**, 2021. Froth flotation of fluorite: A review. Adv. Colloid Interface Sci., 290, 102382.
- Wiertel-Pochopien A., Batys P., Zawala J., **Kowalczyk P.B.**, 2021. Synergistic effect of binary surfactant mixtures in two-phase and three-phase systems. J. Phys. Chem. B. 125, 15, 3855-3866.
- Gao Z., Zawala J., **Kowalczyk P.B.**, 2020. Editorial: Surface Chemistry of Flotation. Front. Mater. doi: 10.3389/fmats.2020.595146.
- Drzymala J., Bednarek-Gabka P., **Kowalczyk P.B.**, 2020. Simplified empirical and phenomenological evaluation of relation between particle size and kinetics of flotation. Powder Technol., 366, 112-118.
- Zawala J., Wiertel-Pochopien A., **Kowalczyk P.B.**, 2020. Critical synergistic concentration of binary surfactant mixtures. Minerals 10(2), 192.
- Zawala J., Malysa K., **Kowalczyk P.B.**, 2020. On importance of external conditions and properties of the interacting phases in formation and stability of symmetrical and unsymmetrical liquid films. Adv. Colloid Interface Sci., 276, 102085.
- Zawala J., Wiertel-Pochopien A., Larsen E., **Kowalczyk P.B.**, 2020. Synergism between cationic alkyltrimethylammonium bromides (CnTAB) and nonionic n-octanol in foamability of their mixed solutions. Ind. Eng. Chem. Res. 59(3), 1159-1167.
- Kowalczyk P.B.**, 2019. Honorary note: Jan Drzymala-70th birthday. Physicochem. Probl. Miner. Process. 55(6), 1577-1591.
- Larsen E., Johannessen N.E., **Kowalczyk P.B.**, Kleiv R.A., 2019. Selective flotation of K-feldspar from Na-feldspar in alkaline environment. Miner. Eng. 142, 105928.
- Kowalczyk P.B.**, Bouzahzah H., Kleiv R.A., Aasly K., 2019. Simultaneous leaching of seafloor massive sulphides and polymetallic nodules. Minerals 9(8), 482.

- Larsen E., **Kowalczyk P.B.**, Kleiv R.A., 2019. Non-HF collectorless flotation of quartz. Miner. Eng. 133, 115–118.
- Kowalczyk P.B.**, Manaig D.O., Drivenes K., Snook B., Aasly K., Kleiv R.A., 2018. Galvanic leaching of seafloor massive sulphides using MnO_2 in H_2SO_4 - $NaCl$ media. Minerals 8(6), 235.
- Szczerkowska S., Wiertel-Pochopien A., Zawala J., Larsen E., **Kowalczyk P.B.**, 2018. Kinetics of froth flotation of naturally hydrophobic solids with different shapes. Miner. Eng. 121, 90–99.
- Polowczyk I., Kruszelnicki M., **Kowalczyk P.B.**, 2018. Heterocoagulation of shale particles and bubbles in the presence of ionic surfactants. Colloids and Surfaces A: Physicochem. Eng. Aspects 554, 180–186.
- Polowczyk I., Kruszelnicki M., **Kowalczyk P.B.**, 2018. Oil agglomeration of metal-bearing shale in the presence of mixed cationic-anionic surfactants. Physicochem. Probl. Miner. Process. 54(4), 1052–1059.
- Drzymala J., **Kowalczyk P.B.**, 2018. Classification of flotation frothers. Minerals 8(2), 53.
- Kowalczyk P.B.**, Snook B., Kleiv R.A., Aasly K., 2018. Efficient extraction of copper and zinc from seafloor massive sulphide rock samples from the Loki's Castle area at the Arctic Mid-Ocean Ridge. Miner. Eng. 115, 106–116.
- Kosior D., **Kowalczyk P.B.**, Zawala J., 2018. Surface roughness in bubble attachment and flotation of highly hydrophobic solids in presence of frother-experiment and simulations. Physicochem. Probl. Miner. Process. 54(1), 63–72.
- Kowalczyk P.B.**, Siedlarz M., Szczerkowska S., Wojcik M., 2018. Facile determination of foamability index of non-ionic and cationic frothers and its effect on flotation of quartz. Sep. Sci. Techn. 53(8), 1198–1206.
- Kowalczyk P.B.**, Zawala J., Drzymala J., 2017. Concentration at the minimum bubble velocity (CMV) for various types of flotation frothers. Minerals 7(7), 118.
- Drzymala J., Ratajczak T., **Kowalczyk P.B.**, 2017. Kinetic separation curves based on process rate considerations. Physicochem. Probl. Miner. Process. 53(2), 983–995.
- Kowalczyk P.B.**, Akkaya C., Ergun M., Janicki M., Sahbaz O., Drzymala J., 2017. Water contact angle on corresponding surfaces of freshly fractured fluorite, calcite and mica. Physicochem. Probl. Miner. Process. 53(1), 192–201.
- Kowalczyk P.B.**, Drzymala J., 2017. Selectivity and power of frothers in copper ore flotation. Physicochem. Probl. Miner. Process. 53(1), 515–523.
- Kowalczyk P.B.**, Zawala J., 2016. A relationship between time of three-phase contact formation and flotation kinetics of naturally hydrophobic solids. Colloids and Surfaces A: Physicochem. Eng. Aspects 506, 371–377.
- Kowalczyk P.B.**, Zawala J., Drzymala J., Malysa K., 2016. Influence of hexylamine on kinetics of flotation and bubble attachment to the quartz surface. Sep. Sci. Techn., 51(15–16), 2681–2690.
- Kowalczyk P.B.**, Drzymala J., 2016. Physical meaning of the Sauter mean diameter of spherical particulate matter. Part. Sci. Technol., 34(6), 645–647.
- Kowalczyk P.B.**, Zawala J., Kosior D., Drzymala J., Malysa K., 2016. Three-phase contact formation and flotation of highly hydrophobic polytetrafluoroethylene in the presence of increased dose of frothers. Ind. Eng. Chem. Res. 55(3), 839–843.
- Iyakwari S., Glass H.J., Rollinson G.K., **Kowalczyk P.B.**, 2016. Application of near infrared sensors to preconcentration of hydrothermally-formed copper ore. Miner. Eng. 85, 148–167.
- Janicki M.J., Drzymala J., **Kowalczyk P.B.**, 2016. Structure and surface energy of both fluorite halves after cleaving along selected crystallographic planes. Physicochem. Probl. Miner. Process. 52(1), 451–458.
- Kowalczyk P.B.**, Drzymala J., 2016. Some remarks on attachment of a gas bubble to another phase both immersed in a water. Physicochem. Probl. Miner. Process. 52(1), 147–154.
- Kowalczyk P.B.**, Zaleska E., Danczak O., 2015. Flotation of carbonaceous copper shale-quartz mixture with poly(ethylene glycol) alkyl ethers. Trans. Nonferrous Met. Soc. China 25(1), 314–318.
- Kowalczyk P.B.**, Mroczko D., Drzymala J., 2015. Influence of frother type and dose on collectorless flotation of copper-bearing shale in a flotation column. Physicochem. Probl. Miner. Process. 51(2), 547–558.
- Kowalczyk P.B.**, 2015. Flotation and hydrophobicity of quartz in the presence of hexylamine. Int. J. Miner. Process. 140, 66–71.
- Tasdemir A., **Kowalczyk P.B.**, 2014. Application of statistical process control for proper processing of the Fore-Sudetic Monocline copper ore. Physicochem. Probl. Miner. Process. 50(1), 249–264.
- Kowalczyk P.B.**, Buluc B., Sahbaz O., Drzymala J., 2014. In search of an efficient frother for pre-flotation of carbonaceous shale from the Kupferschiefer stratiform copper ore. Physicochem. Probl. Miner. Process. 50(2), 835–840.
- Iyakwari S., Glass H.J., **Kowalczyk P.B.**, 2013. Potential for near infrared sensor-based sorting of hydrothermally-formed minerals. J. Near Infrared Spectrosc. 21(3), 223–229.
- Drzymala J., **Kowalczyk P.B.**, Oteng-Peprah M., Foszcz D., Muszer A., Henc T., Luszczkiewicz A., 2013. Application of the grade-recovery curve in the batch flotation of Polish copper ore. Miner. Eng. 49, 17–23.
- Kowalczyk P.B.**, 2013. Determination of critical coalescence concentration and bubble size for surfactants used as flotation frothers. Ind. Eng. Chem. Res., 52(33), 11752–11757.

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