


### Curriculum Vitae

<b>Personal Information</b>	<b>Name</b>	Barbara Bielowicz	<b>Gender</b>	Female	
	<b>Academic Title</b>	PhD Eng., Associate Professor			
	<b>College</b>	Faculty of Geology, Geophysics and Environmental Protection AGH University of Science and Technology, Al. Mickiewicza 30, 30-059 Kraków, Poland			
	<b>Discipline</b>	<b>Natural sciences</b> Earth and related environmental sciences, environmental engineering, mining and energy			
	<b>Email</b>	bbiel@agh.edu.pl			
	<b>Mail Add.</b>				
<b>Educational Background</b>	<p>2001 – 2006 Long-cycle Master's degree programme: Mining and Geology, specialization: Economic Geology at the AGH University of Science and Technology, Faculty of Geology, Geophysics and Environmental Protection, Department of Mining and Economic Geology.</p> <p>25.07.2006, MSc in Mining and Geology, specialization: Economic Geology at the AGH University of Science and Technology, Faculty of Geology, Geophysics and Environment Protection, Master's Thesis Title: The mineralogical analysis of products resulting from Cu-Mo-W ore processing, defended with distinction.</p> <p>2006 – 2011, PhD studies at the AGH University of Science and Technology, Faculty of Geology, Geophysics and Environmental Protection, Department of Economic &amp; Mining Geology - Coal Geology Research Group. Advisor: Professor Marian Wagner.</p> <p>2010 – 2011, Postgraduate Studies on Occupational Health and Safety, Faculty of Mining and Geoengineering, AGH University of Science and Technology.</p> <p>09.01.2012, PhD in Earth Sciences, Discipline: Geology, AGH University of Science and Technology, Faculty of Geology, Geophysics and Environmental Protection, Department of Mining and Economic Geology, Thesis: Scheme of a new technological classification of Polish low-rank coal according to international standards. Advisor: Professor Marian Wagner.</p>				
<b>Working Experience</b>	<p>Since 2011, employed at the AGH University of Science and Technology in Kraków, maternity leave in 2014 and 2018.</p> <p>2019 Habilitation.</p> <p>Employed as an Associate Professor since 2019.</p> <p><b>Training and internships</b></p> <p>27.09-31.12.2016, Scientific internship at the Mineral and Energy Economy Research Institute of the Polish Academy of Sciences</p>				

09.2011, Short course: 63rd Meeting of the International Committee for Coal and Organic Petrology (ICCP) in Porto

01.2012, Industrial training in the JSW KWK "Jas-Mos" coal mine,

09.2012, Short course: 64rd Meeting of the International Committee for Coal and Organic Petrology (ICCP) in Beijing

2011, ISA - Internal Auditor Management System, Occupational Health and Safety.

05.2009 „Geoscience Mathematics and Informatics” at the Technical University of Freiberg.

**Scientific cooperation:**

- The University of Belgrade, Serbia, Department of Economic Geology
- University of the Witwatersrand in Johannesburg, South Africa - Working Group Characterization of Gasification Products, International Committee for Coal and Organic Petrology
- Instituto Nacional del Carbon (INCAR-CSIC, Spain) - Working Group Identification and Classification Petrographic Components of Fly Ashes, International Committee for Coal and Organic Petrology
- TU Bergakademie Freiberg - Working Group Liquefaction Residues Classification, International Committee for Coal and Organic Petrology
- The School of Biological, Earth and Environmental Sciences (BEES), Sydney Australia - Working Groups Coal Bed Methane-CO<sub>2</sub> Sequestration and Shale Gas Studies, International Committee for Coal and Organic Petrology
- National Technical University of Athens, School of Mining and Metallurgical Engineering - Working Group Xylite Classification, International Committee for Coal and Organic Petrology
- Bundesanstalt für Geowissenschaften und Rohstoffe (BGR) im GEOZENTRUM HANNOVER - Working Group Identification of Dispersed Organic Matter, International Committee for Coal and Organic Petrology
- Ústav Geoniky AV ČR, Ostrava, Czech Republic - organization of the Czech and Polish Conference GEOLOGY OF COAL BASINS, 2013
- The Institute for Chemical Processing of Coal in Zabrze - cooperation in the project: "Development of coal gasification technology for highly efficient production of fuels and electricity" and the exchange of experiences. The project has developed a common position on the quality and petrographic composition of lignite for fluidized-bed gasification process
- The Central Mining Institute - cooperation in the project: "Development of coal gasification technology for highly efficient production of fuels and electricity" and in determining the quality parameters of coal. The assessment of quality of coal before and after the gasification in the ex-situ reactor
- The „Barbara” experimental mine in Mikołów - cooperation in the project: "Development of coal gasification technology for highly efficient production of fuels and electricity". Cooperation in the assessment of the quality of coal and residues produced as a result of the gasification process in the ex-situ reactor

	<ul style="list-style-type: none"> <li>• PGE KWB Turów cooperation in the project: "Development of coal gasification technology for highly efficient production of fuels and electricity"</li> <li>• PGE KWB Bełchatów - cooperation in documenting (exploration) of the "Szczerców" lignite deposit</li> <li>• Przedsiębiorstwo Geologiczne we Wrocławiu PROXIMA S.A. cooperation in documenting (exploration) of the „Złoczew” lignite deposit</li> <li>• Centralne Laboratorium Pomiarowo-Badawcze w Jastrzębiu-Zdroju cooperation in the Sonata project and the exchange of experiences</li> </ul>
<p><b>Research Interests</b></p>	<p>Petrographic composition and critical elements in secondary waste from incineration of municipal waste, fly ash, bottom ash, combustion, waste</p> <p>Coal geology, Clean coal technologies, critical elements, petrography,</p>
<p><b>Major Publications*</b></p>	<p>1 The impact of coal’s petrographic composition on its suitability for the gasification process: the example of Polish deposits / Barbara BIELOWICZ, Jacek MISIAK // Resources [Dokument elektroniczny]. — Czasopismo elektroniczne ; ISSN 2079-9276. — 2020 vol. 9 iss. 9, art. no. 111, s. 1–20. — Wymagania systemowe: Adobe Reader. — Bibliogr. s. 17–20, Abstr.. — Publikacja dostępna online od: 2020-09-09. — tekst: <a href="https://www.mdpi.com/2079-9276/9/9/111/pdf">https://www.mdpi.com/2079-9276/9/9/111/pdf</a></p> <p>2 Petrographic characteristics of coal gasification and combustion by-products from high volatile bituminous coal / Barbara BIELOWICZ // Energies [Dokument elektroniczny]. — Czasopismo elektroniczne ; ISSN 1996-1073. — 2020 vol. 13 iss. 17 art. no. 4374, s. 1–24. — Wymagania systemowe: Adobe Reader. — Bibliogr. s. 21–24, Abstr.. — Publikacja dostępna online od: 2020-08-25. — tekst: <a href="https://www.mdpi.com/1996-1073/13/17/4374/pdf">https://www.mdpi.com/1996-1073/13/17/4374/pdf</a></p> <p>3 Changes in the spontaneous combustion tendency of humic coals according to their petrographic composition and physico-chemical properties — Wpływ parametrów fizyko-chemicznych i petrograficznych węgla humusowego na jego skłonność do samozapłonu / Barbara BIELOWICZ // Gospodarka Surowcami Mineralnymi = Mineral Resources Management ; ISSN 0860-0953. — 2020 vol. 36 iss. 2, s. 197–218. — Bibliogr. s. 215–216, Abstr., Streszcz.. — tekst: <a href="https://gsm.min-pan.krakow.pl/pdf-121940-">https://gsm.min-pan.krakow.pl/pdf-121940-</a></p> <p>4 Ash characteristics and selected critical elements \$(Ga, Sc, V)\$ in coal and ash in Polish deposits / Barbara BIELOWICZ // Resources [Dokument elektroniczny]. — Czasopismo elektroniczne ; ISSN 2079-9276. — 2020 vol. 9 iss. 9 art. no. 115, s. 1–30. — Wymagania systemowe: Adobe Reader. — Bibliogr. s. 25–30, Abstr.. — Publikacja dostępna online od: 2020-09-19. — tekst: <a href="https://www.mdpi.com/2079-9276/9/9/115/pdf">https://www.mdpi.com/2079-9276/9/9/115/pdf</a></p> <p>5 The suitability of Polish lignite for gasification / Barbara BIELOWICZ // Clean Technologies and Environmental Policy ; ISSN 1618-954X. — 2019 vol. 21 iss. 5, s. 1115-1130. — Bibliogr. s. 1129–1130, Abstr.. — Publikacja dostępna online od: 2019-04-16. — tekst: <a href="https://link.springer.com/content/pdf/10.1007%2Fs10098-019-01695-z.pdf">https://link.springer.com/content/pdf/10.1007%2Fs10098-019-01695-z.pdf</a></p> <p>6 Petrographic composition of the ex-situ lignite gasification residues / Barbara BIELOWICZ, Michał Raszowski, Natalia MACIEJOŃCZYK // Energy Sources. Pt. A, Recovery, utilization, and environmental effects [Dokument elektroniczny]. — Czasopismo elektroniczne ; ISSN 1556-7036. — 2019 vol. 41 iss. 14, s. 1762–1779. — Wymagania systemowe: Adobe Reader. — Bibliogr. s. 1777–1779, Abstr.. — Publikacja</p>

dostępna online od: 2018-11-21. — tekst: <https://www-1tandfonline-1com-15qtyws820142.wbg2.bg.agh.edu.pl/doi/pdf/10.1080/15567036.2018.1549153?needAccess=true>

7 Petrographic composition of coal from the Janina mine and char obtained as a result of gasification in the CFB gasifier — Skład petrograficzny węgla z kopalni Janina i karbonizatu uzyskanego w wyniku jego zgazowania z cyrkulacyjnym złożem fluidalnym / Barbara BIELOWICZ // *Gospodarka Surowcami Mineralnymi = Mineral Resources Management* ; ISSN 0860-0953. — 2019 vol. 35 iss. 1, s. 99–116. — Bibliogr. s. 113–115, Abstr.. — tekst: <https://gsm.min-pan.krakow.pl/pdf-103143-36751?filename=Petrographic%20composition.pdf>

8 Petrographic composition of char from the gasification of coal from the Wieczorek Mine after combustion — Skład petrograficzny karbonizatu ze zgazowania węgla z kopalni Wieczorek i popiołów po jego spalaniu / Natalia MACIEJOŃCZYK, Barbara BIELOWICZ // *Gospodarka Surowcami Mineralnymi = Mineral Resources Management* ; ISSN 0860-0953. — 2019 vol. 35 iss. 2, s. 69–86. — Bibliogr. s. 83–84, Abstr., Streszcz.. — tekst: <https://gsm.min-pan.krakow.pl/pdf-110359-40677?filename=Petrographic%20composition.pdf>

9  $SCO_{2}$  sorption properties of selected lithotypes of lignite from Polish deposits / Barbara BIELOWICZ, Paweł BARAN // *Geological Quarterly* ; ISSN 1641-7291. — 2019 vol. 63 no. 4, s. 786–800. — Bibliogr. s. 799–800. — Publikacja dostępna online od: 2019-12-31. — tekst: <https://gq-1pgi-1gov-1pl-1kh4qn5z500c4.wbg2.bg.agh.edu.pl/article/view/26178/pdf>

10 Badania techniką spektroskopii Ramana zmiany struktury wybranych macerałów węgla brunatnego w procesie zgazowania — Changes in the structure of lignite macerals during the gasification process determined by Raman spectroscopy / Barbara BIELOWICZ // *Przemysł Chemiczny* ; ISSN 0033-2496. — 2019 t. 98 nr 2, s. 241–245. — Bibliogr. s. 244–245

11 The forms of occurrence and chemical composition of sulfides in the LW Bogdanka bituminous coal deposits of the Lublin Coal Basin — Formy występowania i skład chemiczny siarczków w pokładach węgla kamiennego LW Bogdanka w Lubelskim Zagłębiu Węglowym / Barbara BIELOWICZ, Jacek MISIAK // *Gospodarka Surowcami Mineralnymi = Mineral Resources Management* ; ISSN 0860-0953. — 2018 vol. 34 iss. 3, s. 37–51. — Bibliogr. s. 47–49, Abstr., Streszcz.. — tekst: <https://min-pan.krakow.pl/wydawnictwo/wp-content/uploads/sites/4/2018/10/bielowicz-misiak.pdf>

informacja dotycząca Impact Factor niedostępna

12 Change of the petrographic composition of lignite during the ex-situ lignite gasification / Barbara BIELOWICZ // *Fuel : the science and technology of fuel and energy* ; ISSN 0016-2361. — 2017 vol. 206, s. 219–229. — Bibliogr. s. 229, Abstr.. — Publikacja dostępna online od: 2017-06-12. — tekst: <https://goo.gl/QcXR49>

13 The suitability of polish ortho-lignite deposits for clean coal technologies — Przydatność polskich złóż miękkiego węgla brunatnego w czystych technologiach węglowych / Barbara BIELOWICZ // *Gospodarka Surowcami Mineralnymi = Mineral Resources Management* ; ISSN 0860-0953. — 2016 vol. 32 iss. 4, s. 109–127. — Bibliogr. s. 125, Streszcz., Abstr.. — tekst: [goo.gl/mm2wFO](https://goo.gl/mm2wFO)

	<p>14 Siarczki w pokładach węgla kamiennego warstw orzeskich \em{s.s.} serii mułowcowej (westfal B) we wschodniej części GZW — Sulphides in hard coal seams from the Orzesze Beds s.s. of mudstone series (Westphalian B) in the eastern part of the Upper Silesian Coal Basin / Barbara BIELOWICZ, Jacek MISIAK // <i>Gospodarka Surowcami Mineralnymi = Mineral Resources Management</i> ; ISSN 0860-0953. — 2016 vol. 32 iss. 3, s. 23–38. — Bibliogr. s. 35–37, Streszcz., Abstr.. — tekst: <a href="https://goo.gl/m5Agge">https://goo.gl/m5Agge</a></p> <p>15 Petrographic characteristics of lignite gasification chars / Barbara BIELOWICZ // <i>International Journal of Coal Geology</i> ; ISSN 0166-5162. — 2016 vol. 168, Part 1, s. 146–161. — Bibliogr. s. 160–161, Abstr.. — Publikacja dostępna online od: 2016-04-27. — The 67th ICCP Meeting: Coal and Organic Petrology – new perspectives and applications: a tribute to Marlies Teichmüller (1914-2000) Symposium. — tekst: <a href="https://goo.gl/b2kZ02">https://goo.gl/b2kZ02</a></p> <p>16 Reprint of "The possibility of underground gasification of lignite from Polish deposits" / Barbara BIELOWICZ, Jacek R. Kasiński // <i>International Journal of Coal Geology</i> ; ISSN 0166-5162. — 2015 vol. 139, s. 191–205. — Bibliogr. s. 205, Abstr.. — Publikacja dostępna online od: 2014-10-31. — ICCP TSOP 2013 : 65th annual meeting of ICCP and 30th annual meeting of TSOP : August 25 – September 4, 2013, Katowice. — tekst: <a href="http://wbg2.bg.agh.edu.pl/han/atoz/www.sciencedirect.com/science/article/pii/S0166516214002201/pdf?md5=d62c1ae45a474fb2dc8c025871907899&amp;pid=1-s2.0-S0166516214002201-main.pdf">http://wbg2.bg.agh.edu.pl/han/atoz/www.sciencedirect.com/science/article/pii/S0166516214002201/pdf?md5=d62c1ae45a474fb2dc8c025871907899&amp;pid=1-s2.0-S0166516214002201-main.pdf</a></p>
<p><b>Research Projects*</b></p>	<p>1. 2014-2018 <b>Project Leader</b> of the SONATA project under the National Science Centre: <i>Analiza wpływu budowy petrograficznej węgla humusowego na jego własności fizykochemiczne (The impact of petrographic composition of humic coal on its physicochemical properties)</i>, Contract: UMO-2013/09/D/ST10/04045., Performed at the AGH University of Science and Technology.</p> <p>2. 2018, <b>The Dean's grant</b> <i>Badania chemiczno-petrograficzne karbonizatów (Chemical and petrographic analysis of chars)</i>, No. 15.11.140.187, <b>Project Leader</b>, financed by the Ministry of Science and Higher Education.</p> <p>3. 2017 <b>The Dean's grant</b> <i>Charakterystyka petrograficzna węgla i pozostałości po jego zgazowaniu (Petrographic characteristics of lignite and its gasification residues)</i>, no. 15.11.140.014. <b>Project Leader</b>. Financed by the Ministry of Science and Higher Education.</p> <p>4. 2014 <b>The Dean's grant</b> <i>Charakterystyka petrograficzna węgla i pozostałości po jego zgazowaniu (Petrographic characteristics of lignite and its gasification residues)</i>, No. 15.11.140.493. <b>Project Manager</b>. Financed by the Ministry of Science and Higher Education.</p> <p>5. 2011-2015 Opracowanie technologii zgazowania węgla dla wysokoefektywnej produkcji paliw i energii elektrycznej (Development of coal gasification technology for highly efficient production of fuels and electricity) financed by the National Centre for Research and Development (NCBR). Research Task no. 3: Opracowanie technologii zgazowania węgla dla wysokoefektywnej produkcji paliw i energii elektrycznej (Development of coal gasification technology for highly efficient production of fuels and electricity) TB 1.5.3 financed by the National Center for Research and Development within the strategic program of scientific research and development: „Zaawansowane technologie pozyskiwania energii ” (Advanced Technologies for Energy Generation). Consortium, AGH in Krakow. <b>The contractor of the research project</b></p> <p>6. 2013 - 2017 <b>Statutory Research</b> Pierwiastki krytyczne w złożach węgla (Critical elements in coal deposits) No. 11.11.140.320, financed by the Ministry of Science and Higher Education. <b>Contractor</b></p>

<b>Professional Membership</b>	<p>Since 2013, a member of the International Committee for Coal and Organic Petrology.</p> <p>Since 2015, a member of The Society for Organic Petrology.</p> <p>Since 2017, a convener of Characterization of Gasification Products Working Group of the International Committee for Coal and Organic Petrology</p> <p>Since 2020 Member of the Scientific Committee of the Polish Academy of Sciences for the term 2020-2023 - Committee of Geological Sciences of the Polish Academy of Sciences</p>
<b>Potential Research Projects**</b>	<p>Critical elements in coal, waste, fly ash, etc. Coal geology. Coal petrology. Coal gasification. Clean coal technologies.</p>

\* Please list achievements of recent 5 years

\*\* This CV is intended to match Chinese and Polish Scientists within SPUC member universities, and Potential Research Projects is intended to apply for Sino-Polish or EU scientific cooperation projects.