Curriculum Vitae

<table>
<tr><td rowspan="7">Personal Information</td><td>Name</td><td>Beata Grabowska</td><td>Gender</td><td></td><td rowspan="3">  </td></tr>
<tr><td>Academic Title</td><td colspan="3">Professor</td></tr>
<tr><td>College</td><td colspan="3">AGH University of Science and Technology</td></tr>
<tr><td>Discipline</td><td colspan="4">Materials Engineering, Polymer Chemistry</td></tr>
<tr><td>Email</td><td colspan="4">Beata.grabowska@agh.edu.pl</td></tr>
<tr><td>Telephone (office)</td><td colspan="4"></td></tr>
<tr><td>Mail Add.</td><td colspan="4"></td></tr>
<tr><td>Educational Background</td><td colspan="5">- AGH University of Science and Technology in Cracow, Faculty of Foundry Engineering Department of Foundry Processes Engineering – Doctor’s Degree Studies and research in environmental protection.
- Jagiellonian University in Cracow, M.Sc. in chemistry, specialty: Polymer Technology.
- Jagiellonian University in Cracow, Institute of Psychology.</td></tr>
<tr><td>Working Experience</td><td colspan="5">Training in the field of ISO standards: 19011, 9001, 14000 and other environmental management regulations, TUVPOL, Poland (2008).
. Poland, Certificate, VI School of Thermal Analysis (SAT), WIMiC and PTKAT, Poland (2010).
Zertifikat, Methods coupled in thermal analysis TG / STA-FTIR, TG / STA-MS, NETZSCH, Polska (2010).
Certificate "Strengthening entrepreneurship in the field of science-business cooperation" Center for Training and Organization of Quality Systems, Europoint, Poland, (2011).
"SPIN - an effective entrepreneur and scientist" certificate. Human Capital Operational Program Measure 8.2.1, Medical Technology Transfer Center, Technology Park, Academic Business Incubator, AGH and PK, Poland, (2012).
Certificate of training in the use of a gas chromatograph with a FID detector organized by ANCHEM (2012).
Certificate of training in the use of gas chromatograph coupled with mass spectrometry organized by ANCHEM (2014).
Certificate of internship completion as part of the "Innovative transfer" project, EU Human Capital Operational Program, Innovation Development</td></tr>
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	Agency S.A. (2015). 9. Certificate "Application of thermal analysis methods in laboratory and industrial research", PTKAT and NETZSCH (2017). 10. Certificate of completion of the training in the field of "Nescive methods of testing composites and construction polymers", EC Test Systems (2017). 11. Training certificate "Modern techniques in light microscopy", Carl Zeiss Sp. z o.o. (2018). 12. Training certificate in the field of criteria and the model of application evaluation within the PO-IR program, NCRD (2018). 13. Certificate confirming the competence to evaluate applications for changes in the area of investment funds in BRIdge Alfa and NCBR (2019) competitions.
Research Interests	1. Polymers materials: a) Development of a new group of polymer binders in the form of water-soluble compositions with poly(acrylic acid) or its salts, and environment-friendly modified biopolymer to be applied in foundry engineering; b) Crosslinking and degradation mechanism; c) Polymers in 3D printing; 2. Modification of organic/inorganic binders for moulding sands (silicate, montmoryllonite); 3. Environmental studies, including: a) Development of a method for spectrophotometric montmorillonite content determination using *Cu(II)-triethylenetetramine complex in moulding sands with bentonite;* b) Thermal degradation: participation in developing the method for BTEX emissions measurement and method for BTEX concentration assay using gas chromatography (GC); c) Participation in the works related to the use of the material from used moulding sands; d) Biodegradation of polymer binders; 4. Participation in the works on in situ synthesis of composite layers and zones in ferroalloys casts.
Major Publications*	**1. B. Grabowska**, K. Hodor, K. Kaczmarska, A. Bobrowski, Ż. Kurleto-Kozioł, C. Fischer: *Thermal analysis in foundry technology. Pt. 2, TG-DTG-DSC, TG-MS and TG-IR study of the new class of polymer binders BioCo*, Journal of Thermal Analysis and Calorimetry, 2017 vol. 130 iss. 1, s. 301–309. IF 2,209. **2. B. Grabowska**, M. Sitarz, E. Olejnik, K. Kaczmarska: *FT-IR and FT-Raman studies of cross-linking processes with Ca^{2+} ions, glutaraldehyde and microwave radiation for polymer composition of poly(acrylic acid)/sodium salt of carboxymethyl starch, Pt.* 1, Spectrochimica Acta. Part A, Molecular and Biomolecular Spectroscopy, 2015 vol. 135, s. 529–535. IF 2,653; **3. Grabowska**, M. Sitarz, E. Olejnik, K. Kaczmarska, B. Tyliszczak: *FT-IR and*

	FT-Raman studies of cross-linking processes with Ca^{2+} ions, glutaraldehyde and microwave radiation for polymer composition of poly(acrylic acid)/sodium salt of carboxymethyl starch – In moulding sands, Pt. 2, Spectrochimica Acta. Part A, Molecular and Biomolecular Spectroscopy, 2015 vol. 151, s. 27–33. IF 2,653; **4. B. Grabowska**, P. Malinowski, M. Szucki, Ł. Byczyński: *Thermal analysis in foundry technology. Pt. 1, Study TG-DSC of the new class of polymer binders BioCo*, Journal of Thermal Analysis and Calorimetry, 2016 vol. 126 iss. 1, s. 245–250; IF1,953; 5. Kaczmarska K., **Grabowska B**., Spychaj T., Zdanowicz M., Sitarz M., Bobrowski A., Cukrowicz S.: *Effect of microwave treatment on structure of binders based on sodium carboxymethyl starch: FT-IR, FT-Raman and XRD investigations*, Spectrochimica Acta. Part A, Molecular and Biomolecular Spectroscopy, 2018 vol. 199, s. 387–39. IF 2,653; **6. B. Grabowska**, B. Pilch-Pitera, K. Kaczmarska, B. Trzebicka, B. Mendrek, D. Drożyński, P. Łątka: *Properties of poly(acrylic acid)/modified starch compositions applied as a new polymeric binders*, Polimery 2015 vol. 60 nr 3, s. 179–185, IF 0,718; 7. Bobrowski A., Drożyński D., **Grabowska B**., Kaczmarska K., Kurleto-Kozioł Ż., Brzeziński M.: *Studies on thermal decomposition of phenol binder using TG/DTG/DTA and FTIR-DRIFTS techniques in temperature range* 20−500^{o}C, China Foundry, 2018 vol. 15 no. 2, s. 145–151. 8. Olejnik E., Tokarski T., Sikora G., Sobula S., Maziarz W., Szymański Ł., **Grabowska B.**: *The effect of Fe addition on fragmentation phenomena, macrostructure, icrostructure, and hardness of* TiC−Fe *local reinforcements fabricated/ emph{in situ} in steel casting,* Metallurgical and Materials Transactions. A, Physical Metallurgy and Materials, 2019, vol. 50A iss. 2, s. 975–986. IF 2,050 9. A. Bobrowski, **B. Grabowska**, S. Żymankowska-Kumon, Ż. Kurleto-Kozioł, *Physico-chemical and environmental characterisation of the dust from dry dedusting of the green sand*, Archives of Foundry Engineering, 2016 vol. 16 iss. 4, s. 33–36. 10. Sylwia Cukrowicz, **Beata Grabowska**, Karolina Kaczmarska, Artur Bobrowski, Maciej Sitarz, Bożena Tyliszczak, *Structural Studies (FTIR, XRD) of Sodium Carboxymethyl Cellulose Modified Bentonite*, ARCHIVES of FOUNDRY ENGINEERING Volume 20, Issue 3/2020, 119-125.

Research Projects*	1. Scientific-research contract "Carrying out tests of bentonite-kormix mixture" commissioned by Zakłady Górniczo-Metalowe Zębiec (2019) - **Supervisor**. 2. The AGH-Instbud scientific-research contract, "Physicochemical characteristics of systems with the participation of polymers capable of photocrosslinking in the UVA-C range" No. 5.5.170.628 (2018) - **Supervisor**. 3. ISIS Experiment 1810026, Title: Cross-linking processes with microwave radiation and neutron Compton scattering. PI: Dr Beata Grabowska, ISIS Neutron and Muon Source User Office, Science and Technology Facilities Council, Rutherford Appleton Laboratory, Harwell Oxford, Didcot, OX11 0QX United Kingdom (2018) - **Supervisor.** 4.The AGH-Instbud scientific-research contract, "Physicochemical characteristics of polymeric material capable of photocrosslinking" No. 5.5.170.589 (2017) - **Supervisor**. 5. Project "Innovation as an opportunity for the development of Małopolska enterprises" UDA-POKL.08.02.01-12-026 / 14 (2015) - Contractor. 6. Małopolska Regional Development Agency S.A., Human Capital - National Cohesion Strategy, Knowledge, practice, cooperation - the key to business success, Project co-financed by the European Union under the European Social Fund (2013-2014) - Contractor. 7. *The statutory work: Polymer-silicate compositions as new materials for use in molding and core molding technologies. 11/11/178,318 13 (from 2016)* - **Supervisor**. 8. Małopolska Agencja Rozwoju Regionalnego S.A., Kapitał Ludzki – Narodowa strategia spójności, Wiedza, praktyka, współpraca - klucz do sukcesu w biznesie, Projekt współfinansowany przez Unię Europejską w ramach Europejskiego Funduszu Społecznego (2013-2014) - Contractor. 9. Project "Ecological molding and core compounds with inorganic binders with improved technological properties". The project is financed under the MNiSW program "Incubator of Innovation +" implemented by the consortium of the AGH University of Science and Technology in Cracow AGH Center for Technology Transfer and the Krakow Technology Innovation Center INNOAGH Ltd. "Support for managing research and co-marketing of R & D results in research units and enterprises "as part of SG OP 2014-2020, Measure 4.4 - Increasing the human resources potential of R & D. Contract number D-WPP / 3/2> Implementation period: 1.04-30 November (2018) - Contractor.
Professional Membership	1. President of the Association of Polish Foundrymen (STOP) at the Faculty of Foundry of AGH (from 2015); 2. Member of the Board of the Cracow Branch of the Polish Chemical Society (PTChem) (from 2019). 3. Editor-in-Chief in Journal of Casting & Materials Engineering (JCME); 4. Participation in the External Experts Team of the National Center for Research and Development, INNOTECH, GEKON, Demonstrator, Biostrateg, Leader, Horizon 2020 Program (from 2014); 5. Member of the Expert Committee for implementation at the National

	Center for Research and Development (from 2017). From 2019, Deputy Chairman of the Team. Execution of 50 ex-perce reports; 6. Participation in the External Experts Team of the National Science Center; 7. Member of the Faculty Commission for the Reception of Statutory Works for the 2016-2020 term in the Resolution of the Council of the Faculty of Foundry, AGH No. 1 / WO-bd.001-4-9 / 16, dated November 21, 2016; 8. Member of the Faculty Execution Commission for the 2016-2020 term in the Resolution of the Council of the Faculty of Foundry Engineering AGH No. 1 / WO-bd.001-4-9 / 16 of dated November 21, 2016; 9. Member of the Faculty Commission for Awards and Decorations for the 2016-2020 term of the Resolution of the Council of the Faculty of Foundry, AGH No. 4 / WO-bd.0011-3-10 / 16, dated December 12, 2016; 10. Member of the University Disciplinary Commission for PhD Students, appointing as a representative the Resolution of the Council of the Faculty of Foundry, AGH No. 13 / WO-bd.001-4-5 / 16 of 26 September 2016, and then the resolution of the Senate;
Potential Research Projects**	Study on new polymer and silicate materials: modifications, cross-linking, thermal degradation (foundry engineering, 3D printing technology, physicochemical study, ecological study: emission, biodegradation).

* 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.