CV

Personal details:

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Address (Office):	Department of Mineralogy, Petrography and Geochemistry Faculty of Geology, Geophysics and Environmental Protection **AGH University of Science and Technology** al. Mickiewicza 30, 30-059 Kraków, Poland
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Educational background:

2019	**Ph.D. in Earth Sciences**, discipline: Geology. AGH University of Science and Technology in Kraków, Faculty of Geology, Geophysics and Environmental Protection. Ph.D. thesis: *Photoactive hybrid nanomaterials derived from layered minerals.* Supervisor: Jakub Matusik, Ph.D.
2014	**M.Sc. title**, branch: Mining and Geology, specialization: Applied Mineralogy and Gemmology. AGH University of Science and Technology in Kraków, Faculty of Geology, Geophysics and Environmental Protection. M.Sc. thesis: *Efficiency and mechanisms of heavy metals adsorption on organically modified kaolinites.* Supervisor: Jakub Matusik, Ph.D.
2013	**B.Sc. title**, branch: Environmental Protection AGH University of Science and Technology in Kraków, Faculty of Geology, Geophysics and Environmental Protection. B.Sc. thesis: *Spectroscopic analysis of mineral composition and organic contaminations in soils.* Supervisor: Jakub Matusik, Ph.D.

Research interest:

- Chemical and mineralogical characterization of layered (clay minerals, LDH) and framework minerals (zeolites).
- Modification of minerals in order to obtain functional mineral materials e.g. sorbents, catalysts.
- The influence of intercalation and grafting processes on the structure, textural parameters and morphology of minerals.
- Photoactive nanomaterials based on clay minerals.
- Determination of sorption properties of mineral-based materials derived mainly from layered minerals and zeolites.
- Pillared clays - synthesis, characterization and catalytic applications.

Research grants

2019-2020	**Grant NCN/NCBR TANGO 2** - Remediation technology of aquatic environments polluted with anionic forms of elements with the use of functionalized kaolinite sorbents (**Co-Investigator**).
2018	**AGH grant for young scientists (15.11.140.186)** – Synthetic α-zirconium phosphate and its organic modification – structural characterization and photoactive properties (**Principal Investigator**).
2018 - 2015	**Grant NCN OPUS (2014/13/B/ST10/01326) -** Photoactive hybrid nanomaterials derived from layered minerals (**Co-Investigator**).

Scientific experience:

Conferences / lectures / workshops

2019.04.03-05	*XX International Conference of Young Geologists, Herl'any, Slovakia.* **Oral presentation:** Photoactive hybrid nanomaterials derived from layered minerals.
2018.09.17-21	*9th Mid-European Clay Conference, Zagreb, Croatia.* **Poster presentation:** Highly ordered α-zirconium phosphate intercalate with *p*-aminoazobenzene: structure refinement and interaction with UV radiation revealed by molecular modeling.
2018.07.24-26	*3rd International Conference on Applied Mineralogy & Advanced Materials, Bari, Italy* **Oral presentation:** Photoresponsive Behavior of α-Zirconium Phosphate Functionalized with Azobenzenes.
2018.06.11-14	*55th Annual Meeting of the Clay Minerals Society, Urbana-Champaign,USA.* **Oral presentation:** Monitoring the azobenzene isomerization in layered intercalation compounds using the infrared spectroscopy.
2018.04.5-7	*XIX International Conference of Young Geologists, Herl'any, Slovakia*

	Oral presentation: The mechanism of basal spacing shifts in smectites functionalized with p-aminoazobenzene (**Distinction)**
2017.07.17-21	*XVI International Clay Conference, Granada, Spain.* **Oral presentation:** UV triggered basal spacing shifts in smectite intercalates **Poster presentation:** Kanemite as a precursor for the synthesis of photoactive layered materials **Co-author of poster:** Insight into the structure of kaolinite and layered zirconium phosphate intercalated with photoactive molecules
2017.06.2-7	*54th Annual Meeting of the Clay Minerals Society (Living Clays), Edmonton, Canada.* **Poster presentation:** Monitoring and understanding the UV induced structural changes for functionalized smectites and kanemite **(Awarded:** 1st prize in the students poster presentation competition) **Co-author of oral presentation:** The Synthesis Approach for the Intercalation of Photoactive Molecules into Kaolinite and Layered Zirconium Phosphate
2017.03.29-2017.04.02	*XVII International Conference of Young Geologist, Dobczyce, Poland.* **Oral presentation:** Photoactivity of organically modified layered minerals
2016.12.02	*Meeting of Polish Clay Group, Kraków, Poland.* **Oral presentation:** Photoactive hybrid nanomaterials based on layered minerals
2016.07.4-8	*8th Mid-European Clay Conference, Koszyce, Slovakia.* **2 poster presentations:** Molecular dynamics simulations of azobenzene intercalates in smectites Structural differences of kaolinite and montmorillonite co-intercalated with ammonium salts and azobenzene
2016.06.5-8	*53rd Annual Meeting of the Clay Minerals Society (Resurgent Clays), Atlanta, USA.* **Oral presentation:** Photoactivity of azobenzene intercalated in organo-smectites **Co-author of poster:** Kaolinite co-intercalated with benzylalkylammonium salts and azobenzene: structural features and photoswitching effect
2016.04.14-16	*XVII International Conference of Young Geologists, Svaty Jur, Slovakia.* **Oral presentation:** Na-montmorillonite modified with ammonium salts and azobenzene as a photoactive nanomaterial (**Awarded:** 1st prize in the students oral presentation competition)
2015.11.18-19	*Workshop on Scientific Writing,* organized within the "SKILLS" program by the Foundation for Polish Science
2015.09.21-23	*2nd Mineral-based Sorbents Conference, Kraków* **Oral presentation:** Organo-kaolinite as an adsorbent of Cr(III) and Ni(II) ions **Poster presentation:** Structural characterization of smectite group minerals intercalated with hexadecyltrimethylammonium bromide

2015.07.5-10	*EuroClay 2015, Edinburgh, Scotland* **Oral presentation:** Structure and photoresponse of azobenzene-smectite intercalation compounds to UV radiation **Co-author of oral presentation:** Organo-kaolinite: 50 Å intercalation compound with azobenzene
2015.05.7-9	*XVI International Conference of Young Geologists, Herlany, Slovakia* **Oral presentation:** Preparation and characterization of azobenzene-smectite photoactive mineral nanomaterials
2014.09.16-19	*7-Mid-European Clay Conference, Dresden, Germany* **Oral presentation:** Sorption efficiency of selected metals on kaolinites grafted with aminoalcohols
2014.05.17-21	*51th Annual Meeting of the Clay Minerals Society, College Station, Texas, USA* **Poster presentation:** Efficiency and mechanism of heavy metals sorption on grafted kaolinites of different structural order (**Awarded**: 3rd prize)
2014.05.18	*Workshop on Surface Modification of Clays and Nanocomposites.*
2014.05.8-10	*XV International Conference of Young Geologists, Międzybrodzie Żywieckie, Poland* **Oral presentation:** Improved copper sorption on grafted kaolinites of different structural order

Teaching experience

- **Mineral engineering**
  In Polish: Inżynieria Mineralna *(2nd degree, 2nd year, IŚ, OŚ)* (2014 – 2016)
- **Spectroscopic methods**
  In Polish: Metody spektroskopowe (as a part of course: Analysis methods of minerals and rock and Structural studies methods) *(1st degree, 3rd year, GG, IŚ)* (2018)
- **Mineral sorbents in environmental protection**
  In Polish: Sorbenty mineralne *(2nd degree, 2nd year, specialization Environmental Assessment, OŚ)* (2014–2016)
- **Soil pollution and remediation**
  In Polish: Skażenie i rekultywacja gleb *(2nd degree, 2nd year, specialization Environmental Assessment, OŚ)* (2015)
- **Environmental geochemistry**
  In Polish: Geochemia środowiska *(2nd degree, 2nd year, specialization Environmental Assessment, OŚ)* (2015)
- **Minerals catalysts**
  In Polish: Katalizatory mineralne *(2nd degree, 2nd year, specialization Mineral engineering, IŚ)* (2015 – 2017)
- **Experimental mineralogy**
  In Polish: Mineralogia eksperymentalna *(2nd degree, 2nd year, specialization Applied Mineralogy and Gemmology, GG)* (2015 – 2017)

Achievements / awards

2018	Student Travel Award ($1500) for participation in the 55th Annual Meeting of the Clay Minerals Society, Urbana-Champagne, USA
2018	Distinction for the oral presentation at the XIX International Conference of Young Geologists, Herl'any, Slovakia
2017	1st prize for the students poster presentation at the 54th Annual Meeting of the Clay Minerals Society (Living Clays), Edmonton, Canada
2016	Rudolf Mock Award for the best students oral presentation at the XVII International Conference of Young Geologists, Svätý Jur, Slovakia
2014	3rd prize for the students poster presentation at the 51st Annual Meeting of the Clay Minerals Society, College Station, USA
2014	Student Travel Award ($1500) for participation in the 51st Annual Meeting of the Clay Minerals Society, College Station, USA.

Parametric summary of the scientific output

Citations (*Scopus*): **38**, without auto-citations: **33**
Hirsch index (*Scopus*): **3**

Citations (*Web of Science*): **34**, without auto-citations: **31**
Hirsch index (*Web of Science*): **3**

Membership:

- Mineralogical Society of Poland, Polish Clay Group (member, 2015-present)
- Clay Minerals Society (member, 2014-present)
- Mineralogical Society of Great Britain and Ireland (member, 2018-present)

Non-Academic Activity:

- Scholarship at the Regional Inspectorate for Environmenral Protection (07.2012)

Kraków, 16.12.2019