

Faculty of Environmental Engineering

Topics of offered PhD theses

Dr hab. inż Izabela Sówka, prof. PWr izabela.sowka@pwr.edu.pl

1. Developing, testing and verification of research methodologies for atmospheric pollution (including particulate matter, odors).
2. Developing and testing statistical and mathematical tools for assessing atmospheric air quality.
3. Analysis and testing of air pollutants chemical changes.
4. Study of the atmospheric phenomena variability on a global scale.
5. Developing and testing a tool for assessing the health effects of atmospheric air pollution.
6. Research on optimization of biological methods in gas purification.

Dr hab. Justyna Rybak, prof. PWr justyna.rybak@pwr.edu.pl

1. Biomonitoring and bioindication:
 - the assessment of pollutants on living organisms,
 - the use of spider webs, hair, feathers and other types of bioindicators for environment quality assessment,
 - the biodiversity assessment of degraded areas based on soil arthropods,
 - the water quality assessment based on macroinvertebrates,
 - biological and ecotoxicological studies of water and soil environment,
 - identification of soil communities of degraded areas and assessment of transformation character along with the proposal of the way of biological recultivation.
2. Ecotoxicological studies
 - the impact of pollutants on invertebrates (toxicity assessment)
3. Studies of air pollution
 - sources and distribution of air pollutants
 - application of passive samplers in air pollution studies

Dr hab. inż. Ryszard Szetela, prof. PWr ryszard.szetela@pwr.edu.pl

1. Wastewater treatment processes.
2. Wastewater sludge treatment processes.
3. Mathematical modeling and optimization of treatment processes.

Prof. dr hab. inż. Małgorzata Kabsch-Korbutowicz malgorzata.kabsch-korbutowicz@pwr.edu.pl

1. Application of natural flocculants in water and wastewater treatment.
2. Removal of specific pollutants from water and wastewater with the use of integrated membrane processes.

Prof. dr hab.inż. Tomasz Suchecki tomasz.suchecki@pwr.edu.pl

1. Air quality indexes
2. Fundamentals of SO₂/NO_x control technologies
3. How smog was defeated in different countries – proposals for Poland.

Dr hab. inż. Jacek Wiśniewski, prof. PWR jacek.wisniewski@pwr.edu.pl

1. Ion-exchange membrane processes for removal of harmful ions from water.
2. Processes with ion-exchange membranes for high-quality water production.

Dr hab. inż. Andrzej Szczurek, prof. PWR andrzej.szczurek@pwr.edu.pl

1. Application of e-nose technology in indoor air quality assessment
2. Gas sensor system for indoor air analysis

Dr hab. inż. Monika Maciejewska, prof. PWR monika.maciejewska@pwr.edu.pl

1. Multivariate data analysis for indoor air quality assessment
2. Classification of indoor air quality with statistical methods

Dr hab. inż. Ara Sayegh, prof. PWR ara.sayegh@pwr.edu.pl

1. Heat pipe based heat exchangers for heat recovery systems.
2. PV/T solar collectors in low energy buildings.
3. Sensitivity of Heat pumps in multigeneration district heating.