

PHD SCHOLARSHIP OFFER

WROCŁAW UNIVERSITY OF SCIENCE AND TECHNOLOGY
POLAND



CONTACT

prof. Bogdan Kuchta

bogdan.kuchta@pwr.edu.pl

TIMELINE

START: October 2023

3 years

SCHOLARSHIP

1000 euro/month

PROJECT DESCRIPTION

Computer simulations of water adsorption in MOFs nano-porous materials. Interpretation of the adsorption mechanism and its application in atmospheric water harvesting.

GOAL OF THE PROJECT

Water harvesting from atmosphere is a promising strategy for decentralized potable water production, without the long-distance transport and delivery. It is one of the envisaged solutions to be applied in many situations: in rural areas, but also water scarcity of arid regions. To achieve this goal, the mechanism of adsorption of water from air must be very well understood.

EXPECTED SKILLS OF THE CANDIDATE

Master degree in physics, physical chemistry, chemical engineering or related field is required.

The prospective PhD student must be familiar with the methodology of classical atomistic simulations such as Monte Carlo and Molecular Dynamics techniques. Experience in programming and/or numerical simulations is an advantage. Basic knowledge of thermodynamics, especially, statistical thermodynamics is mandatory. Understanding of the basic statistical thermodynamics' principles will help in the correct and effective interpretation of the simulation data.

TO APPLY (DEADLINE: 15.05.2023)

To apply, the candidates should send, by email, a CV and motivation letter and copies of degree certificates with official transcripts.

EMAIL: prof. Bogdan Kuchta (bogdan.kuchta@pwr.edu.pl)