



European Crystallographic Association

ECA

Report for school financial support

1. Date, location and title of meeting

Title meeting	First International School on Advanced Porous Materials
Location	Como
Date	June, 21 st – 17 th 2019
Website address	https://mofs.lakecomoschool.org/

2. Please describe how the bursary was used

According to its guidelines, the financial support of 600 euros that ECA generously provided was employed to favour the participation of the two students Anna Walczak (University of Wrocław, Poland) and Lorenci Gjurgjaj (University of Tirana, Albania), in terms of travel and accommodation in the guesthouse of Villa del Grumello.

Needless to say, ECA contribution was duly advertised using all possible means, mainly the web site (<http://MOFs.lakecomoschool.org/>) and the social networks (Twitter #MOFSchool2019, Facebook). Moreover, ECA logo was present in the exhibition material, in the welcoming and closing speeches, in the flyer, and in the booklet of program and abstracts distributed to all the participants.

3. Report (min. 250 words, max. 500 words, will be published on the ECA web site)

The First International School on Advanced Porous Materials (MOFSchool2019), which took place in the period June, 17th-21st 2019 at Villa del Grumello, Como, as part of the events patronized by the Lake Como School on Advanced Studies, was attended by 78 participants - 54 students, 10 teachers, the representatives of 2 commercial sponsors and the Organizing Committee members. The cultural and scientific exchange certainly benefited from the presence of a vast number of foreign attendees, coming from up to 21 different countries of the 5 continents.

Dedicated to an audience of young students neophytes to the chemistry of porous metal-organic materials, the school focused the attention on the synthesis and characterization of these compounds, as well as on a number of representative applications (e.g. CO₂ capture, water capture, volatile organic compounds capture and separation). To the aim, several front lectures and one hands-on session were organized. More in detail, the topics covered by the school involved:

- Synthesis and post-synthesis methods; reticular chemistry; selective capture of greenhouse gases or water from air (Prof. Omar Yaghi). Professor Yaghi also gave an informal evening lecture on personal anecdotes connected with the scientific discoveries realized in his laboratories in the past 20 years.
- Advanced characterization methods: spectroscopies (Prof. Silvia Bordiga); single-crystal X-ray diffraction (Dr. Felipe Gándara); powder in situ X-ray diffraction (Dr. Valentina Colombo); X-ray absorption (Dr. Kirill Lomachenko).

- Topological description and hands-on session with the software TOPOS (Prof. Davide Proserpio and Vladislav Blatov).
- Structural flexibility and defects introduction (Prof. Roland Fischer).
- Role of unsaturated metals as active sites and their characterization; use of structural flexibility for the capture/release of industrially relevant gases and the cooperative adsorption of CO₂ and other strategic gases (Prof. Jeffrey Long).
- Integration of porous materials within circuits for applications in electronics (Dr. Rob Ameloot).

The young participants were given the opportunity to present their research during one flash-presentation session and two poster-presentation sessions. 6 prizes were awarded to 6 young participants for the best poster and flash presentation thanks to the International Union of Crystallography, Berkeley Global Science Institute, Chemical Society Reviews and CrystEngComm.

Overall, thanks also to the 7 grants directly provided by the school budget, 25 grants were assigned, to (fully or partially) cover the travel, accommodation and registration expenses of the students.

The School Directors

Valentina Colombo, Simona Galli, Jorge A.R. Navarro

