



# European Mineralogical Union

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## EMU POSTER PRIZES AWARDED AT EMC2020

During the 3<sup>rd</sup> European Mineralogical Conference (emc<sup>2020</sup>), which took place from 29 August to 2 September 2021 in Cracow (Poland), the Poster Prize Committee of the European Mineralogical Union (EMU) awarded six excellent poster contributions: the young talented researchers won three Poster Awards and three Honorable Mentions. Brief descriptions of the recipients' scientific interests are given below.

### Poster Awards



Tommaso Battiston

POSTER TITLE: **“Thermal and Compressional Behaviour of Natural Borates: a Potentially Aggregates in Radiation-Shielding Concretes”**

Tommaso Battiston is a PhD student at the University of Milan (Italy). He researches the behaviour of geomaterials at non-ambient conditions, in particular the crystal–fluid interactions in microporous compounds at high pressure and temperature.



Johannes Pohlner

POSTER TITLE: **“Inter-Mineral Fe Isotope Fractionation in Eclogites of the Münchberg Massif (Germany) as a Function of Oxidation State”**

Johannes Pohlner is a PhD student at the University of Fribourg (Switzerland). He uses trace element and oxygen isotope geochemistry on the bulk-rock and mineral scale to reconstruct igneous, hydrothermal, and metamorphic processes in high-pressure rocks, with a special focus on

Fe isotopes. His other research interests are U–Pb geochronology of accessory minerals, and the tectonic evolution of the peri-Gondwana terranes during the Paleozoic.

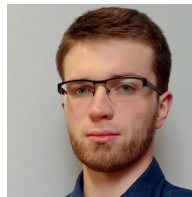


Henrique Straioto

POSTER TITLE: **“Modification of Natural Zeolites to Remove the Herbicide (2,4-dichlorophenoxy)acetic acid from Water through the Adsorption Process”**

Henrique Straioto is a PhD student at the State University of Maringá (Brazil). His scientific interests are in the field of civil construction, including the treatment of water and sanitary/industrial effluents.

### Honorable Mentions



Mateusz Skalny

POSTER TITLE: **“Desulfurization of Liquid Fuels by Ag Modified Fly Ash Derived Na-X Zeolite-Carbon Composite”**

Mateusz Skalny is a PhD student at the AGH University of Science and Technology in Cracow (Poland). He is developing liquid fuel desulfurization by adsorption using mineral adsorbents. His research is focused on modifying porous mineral materials using transition metals (such as nickel, copper, or silver) and applying them as adsorbents for organosulfur compounds present in different fuels. This novel procedure may decrease refining costs and sulfur dioxide emissions to the atmosphere.



Veronica Stopponi

POSTER TITLE: **“Mobility of Volatile-Bearing Magmas in Oxidised Planetesimals: Implications for CO<sub>2</sub> Loss and Storage during Accretion”**

Veronica Stopponi is a PhD student at the Sapienza University of Rome (Italy). She is interested in investigating the properties of melts and glasses as they undergo extreme pressure and temperature conditions and how this might apply to processes occurring in the deep Earth and other planetary interiors. In particular, she aims to understand mantle magma dynamics by experimentally determining the viscosity and atomic structure of volatile-rich melts at high pressures and temperatures by the use of synchrotron techniques.



Shashi Tamang

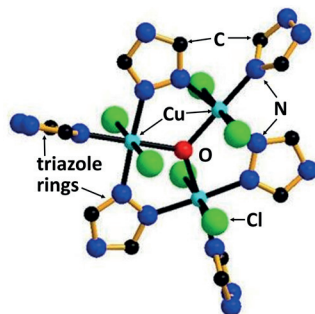
POSTER TITLE: **“Barrovian Metamorphism in the Lesser Himalayan Sequence of Central Nepal seen through the Eyes of Aluminous Metapelites”**

Shashi Tamang is a PhD student at the University of Turin (Italy). He researches the variation in metamorphic CO<sub>2</sub> outputs from the Nepal Himalayas along strike and compares past production of CO<sub>2</sub> with present emissions. His research project is focused on the processes responsible for both past and present-day metamorphic CO<sub>2</sub> production in the Nepal Himalaya.

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occurs as blue, fine-grained, porous, aggregates up to 5 mm in size. Associated minerals are salammoniac, halite, chanabayaite, nitratine, and belloite. Bojarite is a copper triazolate mineral; its ideal formula is  $\text{Cu}_3(\text{N}_3\text{C}_2\text{H}_2)_3(\text{OH})[\text{Cl}_2(\text{H}_2\text{O})_4] \cdot 2\text{H}_2\text{O}$  (Chukanov et al. 2020).

Bojarite crystallizes in the cubic system (space group  $Fd\bar{3}c$ ). Its elegant crystal structure, refined from powder X-ray data using the Rietveld method, comprises  $\text{Cu}^{2+}$  cations interconnected by a hydroxyl anion at the center of an equilateral triangle and further bonded to a pair of N atoms in the triazole ring ( $\text{N}_3\text{C}_2\text{H}_2$ )<sup>-</sup>. These triangular building blocks are linked together into a 3-D network via the third N atom in each ring; the coordination of  $\text{Cu}^{2+}$  is completed by two longer bonds with Cl (FIG. 1).



Bojarite is a supergene mineral formed as the result of alteration of chanabayaite in the contact zone between a deeply altered guano deposit and chalcopyrite-bearing amphibole gabbro. This discovery is the ninth new mineral found in the guano deposit at Pabellón de Pica. It is worth noting that another mineral from that same occurrence, chanabayaite, was selected as the Mineral of the Year in 2015.

### REFERENCES

Chukanov NV and 7 coauthors (2020) Bojarite,  $\text{Cu}_3(\text{N}_3\text{C}_2\text{H}_2)_3(\text{OH})\text{Cl}_2 \cdot 6\text{H}_2\text{O}$ , a new mineral species with a microporous metal–organic framework from the guano deposit at Pabellón de Pica, Iquique Province, Chile. *Mineralogical Magazine* 84: 921–927, doi: <https://doi.org/10.1180/mgm.2020.85>