Geochemical Society

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GOLDSCHMIDT® Hawai'i 2022

THE 32nd V.M. GOLDSCHMIDT CONFERENCE

The annual Goldschmidt Conference of the Geochemical Society (GS) and the European Association of Geochemistry (EAG) was held as a hybrid conference on July 10–15, 2022. After two years of meeting entirely online, more than 2,700 delegates from 71 countries gathered in person in Hawai'i, USA, and remotely to participate in this year's first-of-its-kind conference.

The hybrid meeting reflected the strength and resilience of the entire geochemical community. Hundreds of scientists contributed to the success of both the online and in-person components of the conference by volunteering as theme and session chairs, grant application reviewers, mentors, student helpers (online and in person), DEI advocates, and more. All scientific sessions were available to delegates attending in person and remotely. They were also recorded and available to registered delegates for 30 days after the meeting, allowing people to watch sessions they couldn't attend.

Total attendance by country:

USA	891
China	276
Canada	164
India	156
Germany	150
United Kingdom	131
France	129
Australia	128
Japan	98
Korea, Republic of (South)	76
Switzerland	60
Italy	58
Brazil	30
Israel	29
Poland	26
Other (56 countries)	316

The Local Organizing Committee (LOC), chaired by Ken Rubin, also included Bin Chen, Henrietta Dulai, Jasper Konter, Christopher Sabine, and Tom Shea, all of the University of Hawai'i at Mānoa. They ensured that in-person attendees had the opportunity to experience Hawaiian culture throughout the week. The LOC also coordinated field trips that examined topics ranging from the coastal geology of Oahu to volcanism at Kīlauea Volcano.

The Science Committee was chaired by Ambre Luguet (University of Bonn, Germany) and Isabel Montañez (University of California, Davis, USA) and included Sumit Chakraborty (Ruhr Universität Bochum, Germany), Bin Chen, Takeshi Kakegawa (Tohoku University, Japan), Jennifer Pett-Ridge (Lawrence Livermore National Laboratory, USA), Ken Rubin, Christopher Sabine, and Mark Torres (Rice University, USA). The meeting, which was organized into 15 themes, received 2,513 abstracts. The Science Committee, theme chairs, and session leads did an outstanding job reviewing and organizing the abstracts into a coherent and well-organized program, combining in-person and online oral presentations and posters.

With new safety measures in place, physical posters resumed after two years of online sessions.

A special addition for Goldschmidt 2022 was "Theme 15: Geology through a cultural lens-Diverse perspectives on the natural world," featuring sessions developed with the Edith Kanaka'ole Foundation of Hawai'i. Speakers addressed societal concerns and creative solutions centered around the Papakū Makawalu houses of knowledge—a dynamic Hawaiian worldview of the physical, intellectual, and spiritual foundations from which life cycles emerge. Each day featured four invited speakers and their presentations, followed by a panel discussion on the current and future state of the solid Earth, the water around us, our atmosphere and outer space, and natural and anthropogenic hazards facing our planet.

Diversity, equity, and inclusion was and will continue to be a focal point for Goldschmidt conferences as the societies strive to make the geosciences more inclusive and accessible. Several sessions addressed this topic, including "Hidden histories - towards equity, diversity and inclusion in geosciences," which introduced a diverse and surprising collection of short hidden histories, and engaged participants in discussions on how to use such stories to provide role models. Another session introduced the GS-EAG virtual mentorship program. This program aims to connect geochemists from low and lower-middle income countries that may have limited access to resources, opportunities, or expertise necessary to fulfill their professional goals, with mentors across the globe who can assist, guide, and provide insights to help achieve these goals. Another session addressed how the community can help make the recipients of the societies' awards more diverse.

Delegates enjoyed traditional Hawaiian music and dance in the evening.

The daily plenary talks featured fascinating topics ranging from tackling climate change to rare Earth elements to the Galápagos. Monday's plenary was given by Vanessa Hatje (CIENAM, Dept de Química Analítica, Brazil) on "Rare Earth Elements: Tracers of Natural and Anthropogenic Processes Along the Continent-Ocean Continuum." Karen Harpp (Colgate University, USA) presented Tuesday on "Bent Plumes, and Striped Plumes, and Bilateral Asymmetry (oh my!): The Galápagos as a Case Study of Evolving Mantle Plume Models." EAG President Derek Vance spoke on "Multi-dimensional Constraints on the History of Deep Ocean Oxygenation from Metal Isotope Systems" and Dr. Kathryn Goodenough (British Geological Survey) presented

"Critical Raw Materials for the Energy Transition" on Thursday. The culminating plenary was delivered by Chip Fletcher (University of Hawai'i at Mānoa) on "Multiple Overlapping Planetary Emergencies – A Human Inflection Point." All five plenary lectures can be viewed online at t.ly/vX29.

Professor Xiang-dong Li of the Hong Kong Polytechnic University received the Clair Patterson Award from GS President Sumit Chakraborty during the conference.

Goldschmidt offered many opportunities for early career scientists to expand their knowledge and networks. These included the popular conference mentoring program, career development workshops, and Meet the Plenary lunches. Special recognition goes to the outstanding student helper team, which contributed to the smooth running of events throughout the week.

The 2022 conference offered early career grants to participants in several categories. These included students and recently graduated scientists from countries with low or lower-middle income economies. With support from the U.S. National Science Foundation, geoscience diversity grants supported students from underrepresented groups in the U.S. In total, 70 grants were awarded.

Professor Lenny Winkel of ETH Zürich, Switzerland, receives the 2022 Science Innovation Award from EAG President Derek Vance.

A new group of Geochemistry Fellows received their awards and traditional Hawaiian leis during the conference.

A successful Goldschmidt would not be possible without the support of generous sponsors. The GS and LOC wish to thank our platinum sponsor, Thermo Fisher Scientific, and our principal co-sponsor, the Geochemical Society of Japan. Thank you to the many in-person and virtual exhibitors who shared their expertise with delegates throughout the week.

Swiss Geological Society

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One of the great privileges of being in academia is to work on a daily basis with motivated and talented young scientists. It is important that the excellent work of these young scientists be recognized and awarded. The "Best Masters Thesis Award" from the Swiss Geological Society and the "Paul Niggly Medal" are two prizes that are awarded annually during the Swiss Geoscience Meeting. Since the 100th birthday of Paul Niggli in 1988, the "Paul Niggly Medal" has been awarded by the Paul Niggli Foundation. This medal is Switzerland's most prestigious "young scientist award" in Earth Sciences; it is open to researchers that are up to 35 years old or have received their doctorate in the last six years, and work in the field of mineralogy, geochemistry, petrology, resource geology, or solid-earth geophysics. For further information, visit

https://geolsoc.ch/en/awards/

I have the pleasure to briefly present the winners of 2021 below. The committees of the two awards are looking forward to again receiving nominations of outstanding young scientists for these prizes.

With best wishes,

Jörg Hermann (President of the Swiss Geological Society)

Best Master Price of the Swiss Geological Society

The 2021 Best MSc Thesis Award was given to **Markus Rast** (ETH Zürich, Switzerland) for the thesis: "Geology, geochronology and rock magnetics along Bedretto tunnel (Gotthard Massif, Central Alps) and numerical modelling of quartz-biotite aggregates". This thesis involved fieldwork in the Bedretto Lab tunnel, investigating the magnetism of quartz-biotite shear zones, detailed structural analyses and modelling, as well as zircon dating from the shear zones and host granite. The jury was particularly impressed by the large range of topics that were covered during this MSc research project. Markus Rast successfully combined all of these different approaches into a well-rounded thesis that truly helps in understanding the thermal, temporal, and tectonic evolution of the Gotthard massif in the context of the Alpine orogeny.

Paul Niggli Medal

The Board of the Paul Niggli Foundation has awarded the Paul Niggli Medal 2021 to **Arya Udry** (University of Nevada, Las Vegas, USA), in recognition of her innovative research in the field of igneous petrology, geochemistry, and thermodynamic modelling of Martian meteorites to understand planetary igneous differentiation processes. Prof. Arya Udry completed her undergraduate and master studies at the University of Lausanne, Switzerland, working with Prof. O. Müntener on the petrology and geochronology of Archean gneisses in the Lewisian in Northern Scotland. She finished her PhD in 2014 in Knoxville, USA, on "exploring Martian magmas from the mantle to the regolith", before taking up an assistant and then associate professorship at the University of Nevada, Las Vegas, USA, with a focus on the petrology and geochemistry of meteorites and the geology of Mars.

The citation from Prof. O. Müntener and the response of the awardee are published in the *Swiss Journal of Geosciences* and are available at: https://sjg.springeropen.com/articles/10.1186/s00015-021-00402-9.