



Introductory editorial: T.I.: Advances in Environmental Geochemistry

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A field as broad as geochemistry has evolved naturally to be subdivided, at various levels, into sub-disciplines. These sub-disciplines are distinguished from each other in several different ways and there is considerable overlap between them in many cases. Geochemistry involves the study of the distribution, proportion, and association of chemical elements of the earth's crust that are present in different matrices such as water (fresh, saline, residual, rain, superficial and groundwater), soils, minerals, sediments, rocks and air.

The Argentine meetings of Geochemistry of the Surface (Reuniones Argentinas de Geoquímica de la Superficie, RAGSU) have been held since 2009 with a periodicity of 2 and 3 years. The main research centers of the country participate in the organization and the groups that work specifically in the Geochemistry of the Surface can meet at these events. The initiative to hold the Argentine meetings of Geochemistry of the Surface goes back to 2008 when the group of researchers belonging to the Centro de Investigaciones en Ciencias de la Tierra (CICTERRA) began planning this event with the purpose of creating an academic scientific environment for the communication and discussion of results of the different research areas related to geochemical processes. From here, a group of researchers began to organize the first meeting of Geochemistry of the Surface (I RAGSU), which was held in CICTERRA, Córdoba in September 2009. The second meeting (II RAGSU) was held in the city of Bahía Blanca and was organized by the Instituto Argentino de Oceanografía (IADO, CONICET) and the Universidad

Nacional del Sur (UNS) in April 2012. In 2014, III RAGSU was held in Mar del Plata, which was coordinated by the Instituto de Investigaciones Marinas y Costeras (IIMyC, CONICET) and Instituto de Geología de Costas y del Cuaternario (IGCyC) (CONICET-Universidad Nacional de Mar del Plata). IV RAGSU was held in November 2016 at Centro Patagónico Nacional de Puerto Madryn. The V Argentine meeting of Geochemistry of the Surface (V RAGSU) was held in June 2019 in the city of La Plata (Buenos Aires) and was organized by the Centro de Investigaciones Geológicas and Centro de Química Inorgánica, Universidad Nacional de La Plata. It is worth noting that Universidad Nacional de La Plata is the only one in the country that has offered a degree in Geochemistry since 1958.

The objective of the V RAGSU was to generate the dissemination of scientific advances that have been produced in the surface geochemistry area not only in Argentina but also in the world. The participation of national researchers, many of whom work in collaboration with foreign institutions, as well as the participation of specialist researchers who develop their scientific activities in Centers and Institutes abroad, led the discussion of results and the exchange of experiences in the different lines of research developed and/or the design of future research. The topics developed during V RAGSU included different aspects of the geochemistry of the surface associated with research in sedimentary, pedological, hydrological, hydrogeological, marine, atmospheric, environmental, isotopic, biogeochemical and experimental geochemistry. The dissemination of scientific results and peer discussion led to the exchange of experiences resulting in the design of new activities and/or the growth of action fields in the discipline. These aspects are widely auspicious for the development of future collaborative research between the institutes and working groups that are studying the geochemistry of the surface. For these reasons, the V RAGSU generated an environment conducive to interaction between colleagues, with the participation of geologists, biologists, chemists, oceanographers, hydrologists, agronomists, environmental engineers, geochemists, meteorologists and physicists. The approach to different topics with a common axis,

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was widely beneficial to the growth of the disciplines associated with the theme of geochemistry of the surface. The meeting also provided the space for the training of human resources from the dictates of specialization courses for undergraduate and graduate students.

In this context, it is a pleasure to have the opportunity to publish this Thematic Issue in *Environmental Earth Sciences* (EES) where the scope corresponds well with the topics of RAGSU, and this constant collaboration is planned to continue with another Thematic Issue from VI RAGSU in the future. In this sense, we appreciate the great support received from Dr. James W. Lamoreaux, Editor in Chief of EES, who actively participated in the V RAGSU.

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