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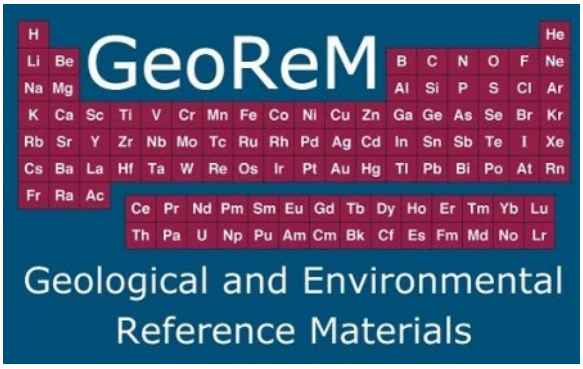

A sneak-peak of GeoReM 2.0: Modernizing the Reference Material Database

MARIE KATRINE TRAUN[1], AXEL D. RENNO[2], DIETER GARBE-SCHÖNBERG[3], LEANDER KALLAS[1], ADRIAN STURM[4], MATTHIAS WILLBOLD[1] AND GERHARD WÖRNER[1]

[1]University of Göttingen
[2]Helmholtz-Zentrum Dresden-Rossendorf, Helmholtz Institute Freiberg for Resource Technology
[3]Kiel University
[4]Göttingen State and University Library

The Geological and Environmental Reference Material database (GeoReM) was founded in 2005 by Professor Klaus Peter Jochum and his research group at the Max Planck Institute for Chemistry, Mainz, Germany. For 20 years the database has been a pillar of geoanalytical research and has served the whole geochemical community as the one-stop-shop for finding and checking reference material values. GeoReM's service has also ensured Improved international comparability and data quality of geochemical datasets and new method procedure establishment. Currently, GeoReM contains 453,666 data values from 13,946 papers of 3,954 geological, microanalytical, environmental and biological reference materials. In 2024 after the passing of Professor Jochum, the Max Planck Institute was unable to continue caretaking GeoReM, and the longevity of this valuable resource hung in the balance. As of August 2025, ownership of the GeoReM database was officially transferred to the International Association of Geoanalysts (IAG), Nottingham, United Kingdom. The technical and infrastructure maintenance is now done in collaboration with the Digital Geochemistry Infrastructure (DIGIS) team, which also caretakes GeoReM's sister database, the GEOROC database (Geochemistry of Rocks of the Oceans and Continents), at the University of Göttingen, Germany. In this transition, the IAG and DIGIS have started a thorough process of updating and modernizing the GeoReM database and webpage to meet modern technical requirements and the needs of future generations of geochemists. These features include performance optimization, safer security and infrastructure, more customized search options including API search, interoperable citations, implementation of persistent identifiers, new web interface, standardized vocabularies and much more, while ensuring full backwards compatibility for legacy GeoReM datasets. In this talk, we present a sneak-peak of this modernization work, new features and workflow for GeoReM to you; GeoReM's community.