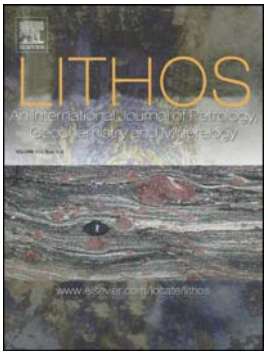

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Zircon U-Pb ages and geochemistry of Devonian A-type granites in the Iraqi Zagros suture zone (Damamna area): New evidence for magmatic activity related to the Hercynian Orogeny

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Abstract

The Damamna granite (DG) is located in the Shalair Valley area in northeast Iraq within the Sanandaj Sirjan Zone (SSZ). The zircon U-Pb ages for the DG rocks are 364–372 Ma, indicating crystallization of the granitic body. The DG rocks are A-type granites, hypersolvus and peraluminous. They are enriched in SiO_2, alkalis, Ga/Al, Ga, Zr and Rb/Sr and depleted in CaO, MgO, Sr, P, and Ti. These rocks show steep REE patterns, with LREE enrichment relative to HREE ($(La/Yb)_N$=5.7–42.5) and pronounced negative Eu anomalies reflecting feldspar fractionation. The geochemical