subdivided into five layers: residual slope accretion (A), Strong semi-regolith (C_1), transition layer (C_2), Weak semi-regolith (C_3) and bedrock (D). The total amount of rare earths is distributed in a "wave" pattern on the longitudinal section, and the distribution pattern of REE in each layer shows the inheritance of the bedrock. The REE of the bedrock is 338×10^{-6}, and the REE of the semi-regolith is up to 642×10^{-6}, which is about twice than bedrock. The weathering crust is enriched in LREE, and the fractionation of light and heavy rare earths is obvious ($(La/Yb)_N = 15.6$). XRD results show that the weathering crust material is mainly composed of weathering residual main minerals (quartz, K-feldspar, plagioclase, biotite), clay minerals (kaolinite, halloysite, illite, gibbsite, etc.) and accessory minerals (zircon, apatite, titanite, etc.).

Conclusions: The content of REE in the semi-regolith of the weathering crust of the Yaocun granite is significantly higher than bedrock, and the distribution patterns are consistent, indicating that the REE in the weathering crust have obvious inheritance during the development of the weathering crust. The clay minerals in the weathering crust are mainly illite, kaolinite and halloysite, and there is a positive correlation between REE and halloysite content. The weathering crust in this area is immature and is in an open system, and the migration of elements is seriously affected by environmental factors. The contribution of (including) rare earth minerals (especially titanite) to the REE in the weathering crust exceeds 50%, followed by plagioclase.

Keywords: Rare earth element (REE); weathering crust; clay minerals; titanite; granite; southern Anhui

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新书介绍

地质学在中国的传播与发展——以地质学教科书为中心(1853~1937)

杨丽娟. 2022. **地质学在中国的传播与发展——以地质学教科书为中心**(1853~1937). 杭州:浙江古籍出版社:1~312.

著名地质学家黄汲清曾说,地质学自 20 世纪以来"是有显著甚至于惊人的进步的"。胡适亦曾撰文高度评价中国地质学的发展:"中国学科学的人,只有地质学者,在中国的科学史上可算得已经有了有价值的贡献。"地质学自 19 世纪成为一门独立的学科,晚清时期传入中国,在极短的时间内顺利完成了引进、发展和本土化等过程,并取得国际公认的成绩,是中国近代发展最快、成就最为突出的学科之一。

地质学在华的引介与发展,是中西科技交流史的重要研究内容,亦是中国地质学史研究较为薄弱的环节。西方地质学在引进的过程中,译著和教科书发挥了重要作用。教科书收录学科较为成熟的理论知识,在知识普及与科学传播方面具有重要作用,并能在一定程度上反映当时的学科水平,对考察近代科学发展历程具有重要的启示价值,是研究不同时期学科发展的宝贵史料。

地质学教科书不仅是科学知识的重要载体,也是学科发展水平的主要标志之一,是传播地质学知识最直接的途径,但目前学术界对于近代以来出版的地质学译著和教科书还缺乏系统深入的研究。

杨丽娟博士的专著结合中国地质学学科发展史,以地质学译著及教科书为研究对象,同时考察中国近代地质教育,尤其是高等地质教育的情况,从文本分析入手,通过对地质学译著、教科书的解读,梳理地质学在中国的传播过程,研究地质学知识体系在译著、教科书中的变化与传承,考察地质学在华引介和发展脉络。时段则以 1853 年首部介绍西方地质学知识的译著《地理全志》出版为起点,至 1937 年全面抗战爆发为终点,重点研究 20 世纪后出版的地质学教科书。全书以时间为序,考察各阶段地质学的发展及教科书内容特点,共五章,后附地质学教科书目录(1902~1937)、矿物学教科书目录(1902~1937)、人名索引和书名索引等。32 开,312 页。

Introduction to the New Book: ***The Spread and Development of Geology in China——Centering on Geology Textbooks***

(刘志强 编辑)