Global Struggle for Critical Minerals

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Abstract:
Critical raw materials are indispensable for modern technologies, the green transition, and national security. This paper synthesizes geopolitical, economic, and geological perspectives on the global supply chains of critical minerals, highlighting the growing concentration of extraction and processing in countries like China and Indonesia. We examine recent legislative responses, including the EU Critical Raw Materials Act and the U.S. Energy Act, alongside strategic initiatives aimed at diversification, domestic processing, and recycling. Furthermore, the study analyzes price volatility, investment trends, and international competition, offering insights into strategic options for Western democracies to mitigate supply chain risks and promote sustainable mineral supply chains.

Keywords:
Critical raw materials, energy transition, geopolitics, rare earth elements, supply chain security.