

The Criticality of Metals: An Interdisciplinary Perspective

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Potential resource scarcity is increasingly in the news – lithium, indium, rare earths, and so forth. The stories typically refer one or more metals as “critical”, but without defining how that determination is made. In fact, determining criticality is a complex and sometimes contentious challenge that is highly interdisciplinary, involving geology, materials science, sociology, political science, economics, and industrial ecology. To explore criticality from an interdisciplinary perspective, a comprehensive methodology has been applied to 62 elements of the periodic table. This presentation will present some results of this work by discussing the more critical metals that are identified, as well as what remains to be explored in order to provide a better informed and more comprehensive picture of resource availability over the long term.