

Solutions that Scale: Role of Materials for Sustainable Development in the 21st Century

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UCI Physical Sciences Communications

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SEMINAR SERIES

Role of Materials for
Sustainable Development in the
21st Century – Criticality, Life
Cycles, and Solution Pathways

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Picture Credit:

Yesenia Garcia

In the recent months and weeks, we have witnessed unprecedented increases in the price of nickel, palladium, platinum, and other key materials that are needed and utilized in the production of components whether they be in the energy sector or the mobility/transportation sector of the world economy. Criticality of a material is an important property which is dictated by geopolitical forces rather than the mechanical, thermal, and electrical properties of materials that are dictated by the atomic architecture of the material. In this presentation, we will review (i) supply chain issues; (ii) production of materials and associated challenges of waste and

carbon footprint; (iii) post-consumer waste; and finally (iv) pathways forward for a sustainable future.

Watch recorded lecture below.

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