

## **Critical Materials and their Impact on Technology**

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A few times before, and several times since the beginning of the industrial revolution, there have been instances when certain materials have fallen into short supply. These events cause price instabilities, industrial disruptions, and sometimes also result in various kinds of geopolitical turmoil. In almost every case, the direction of technology development is changed.

Most recently we have seen a crisis in the availability of some of the rare earth elements, marked by extreme price rises in 2010 and 2011, with broad-ranging impact across a variety of energy industries.

In this talk we will look at how materials supply crises arise, what has happened since the rare earth price spike, what the prospects for supply disruptions might be in the coming decades, and what we might be able to do about it.