

## **New technologies using trace metals of concern**

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Platinum (Pt), palladium (Pd), thallium (Tl), rare earth elements (REEs), gold (Au), silver (Ag), and antimony (Sb), are all chemicals that are essential for global economic growth. Modern technology relies on these chemicals for the production of various industrial goods. However, their use releases pollutants into the environment, thus posing a threat to human health.

We review information on the application of selected trace metals in new technologies to produce industrial goods and the environmental emissions of these metals that result.

The impacts of these chemicals on human health are assessed in the context of their linkage to infectious diseases. The consequent environmental damage and political and economic implications of using these chemicals are also presented.

To reduce environmental emissions and human health impacts, more efficient and cost-effective approaches are needed in mining and production processes. It is suggested that recycling and waste management can be improved significantly in many regions of the world to lessen the environmental impact of using these metals while contributing to a better economic situation.