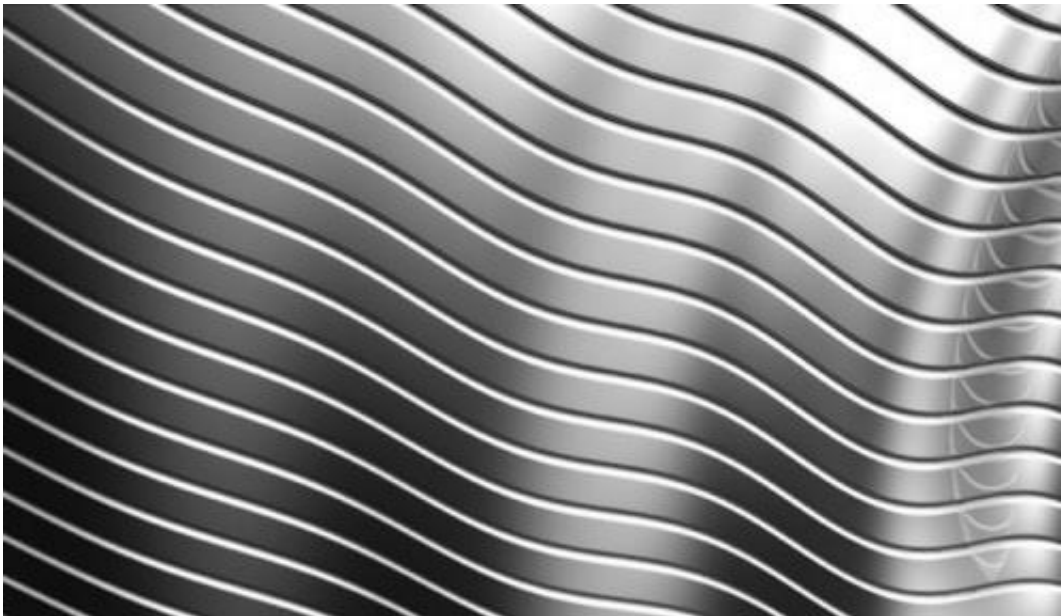


# Infinium to place rare earth metals in Clean Metal Age

June 6 2014, by Nancy Owano

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Infinium, a New England-based company, is gearing up to do business with a kind of evolved metals production; the company is engaging in a cleaner production process, promoting the process as of benefit to the environment and able to produce metals at a lower cost. Their metal primary production systems are based on proprietary anode technology that can reduce energy consumption and emissions. CEO and co-founder, Steve Derezinski, in a company statement last year, said, "Our value proposition is to leverage existing elements from the earth via

clean processes to help make metal production less expensive and environmentally friendlier."

A detailed [look](#) at the company in this week's MIT Technology Review began with a visit with its co-founder and CTO, Adam Powell, who held a ceramic tube that he said was key to making the production of metals cheaper and less polluting.

The company has been in existence since 2008 and is now ready to go to market with its products. MIT Technology Review said the initial [products](#) are rare-earth metals, neodymium and dysprosium. The report said the first customer is the U.S. government, which needs rare earth metals for its stockpile of strategically valuable materials.

In defense, for example, the company stated that "Rare earth magnets are crucial in nearly all military weaponry and equipment such as precision-guided munitions and night-vision goggles." They noted while neodymium oxide is available from mines and plants around the world, there is currently no domestic production of neodymium [metal](#) for [rare earth magnets](#). The company has a rare earth metal production technology, NdDY, positioned as a cost-effective and clean alternative. As for energy, the company stated that neodymium and dysprosium are considered the most critical energy materials by the U.S. Department of Energy.

This month Infinium is starting up production using a machine that will produce half a ton of [rare earth metals](#) annually, said MIT Technology Review, and in September, Infinium will start using another machine that can produce 10 metric tons a year.

MIT Technology Review reported that Infinium has also demonstrated that the process works for aluminum, magnesium, titanium, and silicon, and it plans to scale up production of the first two of those by 2016.

An article appearing in March prepared by the National Science Foundation in partnership with Chemical Engineering Progress (CEP), a publication of the American Institute of Chemical Engineers (AIChE), said that while magnesium metal makes up millions of laptop and cell phone cases, its high cost, twice that of aluminum, has obstructed broader use in other areas such as the automobile industry. "This could soon change, it said, with Infinium; which has developed "a low-cost, energy-efficient, zero emissions process for making this lightweight, strong metal. The process could be a boon to the auto industry."

Powell, who received his PhD in materials engineering from MIT, said, "Human history has been defined by the dominant metal of each Age. We feel it's time for the 'Clean Metal Age' to define how modern companies can leverage new breakthrough technology to bring greatest business value to customers."

**More information:** \* [www.cleanenergycouncil.org/node/6766](http://www.cleanenergycouncil.org/node/6766)

\* [www.infiniummetals.com/profile/management-team.php](http://www.infiniummetals.com/profile/management-team.php)

\* [www.infiniummetals.com/industries/energy.php](http://www.infiniummetals.com/industries/energy.php)

\* [www.infiniummetals.com/docs/IN ... IUM BRAND LAUNCH.pdf](http://www.infiniummetals.com/docs/IN...IUM_BRAND_LAUNCH.pdf)

\* [www.aiche.org/resources/public ... esium-process-debuts](http://www.aiche.org/resources/public...esium-process-debuts)

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