

Infinite Elements Inc. (IEI)

Minority & Woman Owned Business
Headquartered in El Paso, TX
Projected revenues in next 8 years of \$1.3Billion

At present, no biomaterials are being used at a commercial scale to recover metals from e-waste or other non-traditional substrates.

Our Vision:

Diverse Team and Collaborations

Equity and Accessibility

Responsible Recycling & Environmental Awareness

Mentoring and Outreach

By implementing these strategies and activities, IEI aims to ensure that our research and development project not only advances technology but also contributes to the broader goals of diversity, equity, inclusion, as well as both social and environmental responsibility in our community and the research community at large.

Issues:

- USA is dependent on foreign countries to supply rare earth elements (REEs) and critical elements (CEs) from end-of-life E-waste and other sources such as mineral ores/slag piles.
- Extensive research has been dedicated to finding alternative and sustainable sources for REEs and CEs to supply US demands
- Current recovery of REEs and CEs is highly acidic and toxic to the environment.

Solutions:

- For the past 10-years, IEI has held a long-term vision to reduce the carbon footprint of REE refining and CE recovery from consumer waste streams
- IEI has developed patented technology that uses a bio-engineered silica filtration system that “grabs” the REEs and CEs from feedstock
- IEI uses metal binding peptides to selectively capture REEs and CEs from complex mixtures
- IEI has successfully laid the groundwork for sustainable, cost effective, and eco-friendly solutions to address resource scarcity. In summary—it works!
- Successful continuation of pilot scale research will provide the foundation for scaling our innovative filtration system into full manufacturing.
- IEI holds substantial promise for many commercial applications.