

chalcogenides laser crystals CIGS  
2D materials additive manufacturing  
spintronics iridium rings  
CVD precursors europium phosphors  
deposition slugs III-IV semiconductors  
platinum ink buckyballs  
graphene oxide transparent ceramics  
photovoltaics single-walled carbon nanotubes  
superconductors NdFeB magnets  
organometallics copper nanoparticles  
rare earth metals  
solar energy glassy carbon 99.999% ruthenium spheres  
epitaxial crystal growth nickel foam  
mischmetal gallium lump



**AMERICAN  
ELEMENTS**

THE ADVANCED MATERIALS MANUFACTURER®

AuNPs cerium oxide polishing powder

rhodium sponge carbon nanotubes

perovskite crystals MBE quantum dots

OLED lighting diamond micropowder

flexible electronics refractory metals

ultralight aerospace alloys mesoporous silica

**Now Invent.™**

optical glass osmium sputtering targets

yttrium stabilized zirconia nickel cermet

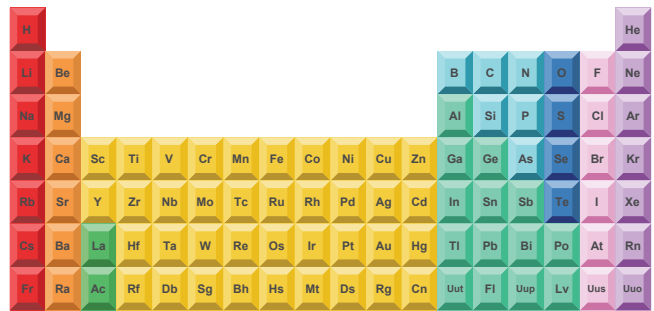
tungsten carbide

ultra high purity materials dysprosium pellets



## *where the future is materializing...*

With a catalog of 16,000+ products and manufacturing & research facilities in the U.S., Mexico, the United Kingdom and China, American Elements is the world leader in commercializing developments in materials science to industrial volume scales.



Our R&D programs have been a key source for academic and corporate research and new product development for over two decades, ushering in fundamental technological breakthroughs since 1990 including LED lighting, smartphones, fuel cells, and electric cars.

Fundamental expertise in the bulk manufacturing of advanced and engineered materials allows us to meet the industrial scale needs of thousands of global manufacturers in a wide range of industry fields (including over 40% of the Fortune 50™ list of companies), all U.S. national laboratories & military branches, and corporations across the globe.

### KEY INDUSTRIES SERVED

- 3D Printing
- Aerospace
- Agriculture
- Alternative Energy
- Automotive
- Chemical Manufacturing
- Defense
- Electric Power
- Electronics
- Green Technology
- Lighting
- Medical Devices
- Metallurgy
- Nuclear Energy
- Oil & Gas
- Optics & Glass
- Pigments & Coatings
- Pharmaceuticals & Cosmetics
- Research & Laboratory
- Space Technology
- Solar Energy
- Water Treatment

American Elements' Not for Profit Academics & Periodicals Department provides financial support to materials science and high technology programs at all academic levels, having sponsored more than 300 industry and educational conferences annually for over 10 years in countries all over the globe. In 2011, we co-sponsored with the National Science Foundation a four-part PBS series on NOVA entitled "Making Stuff" explaining to the general public the world of materials science.

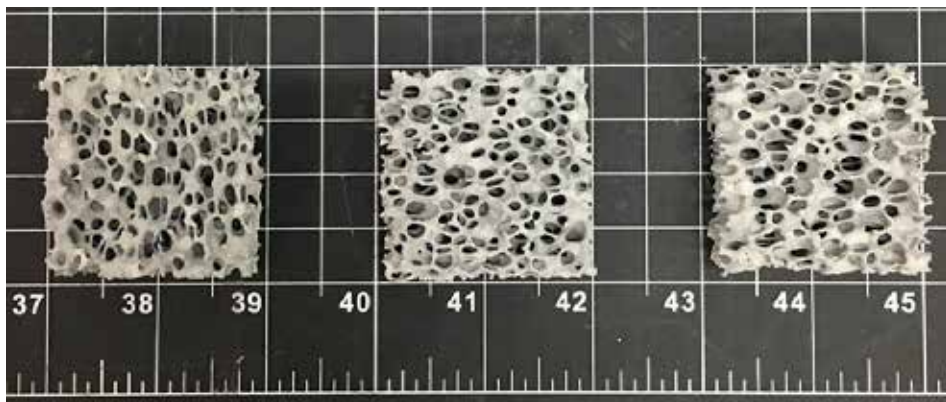
Our online catalog and compendium of material science data and research is annually viewed by more than 1.2 million visitors and the American Elements Twitter account has more than 35,000 followers.



2018 Ceramics Expo

All we ask of our customers and partners is reflected in two simple words...

***Now Invent!***



## PRODUCT LINES

- Metals & Alloys
- Chemicals & Salts
- Ceramics
- Deposition Materials
- High Purity Materials
- Metallic & Ceramic Foams
- Nanomaterials
- Optical Crystals
- Organometallics
- Rare Earths
- Semiconductors
- Sputtering Targets
- Stable Isotopes



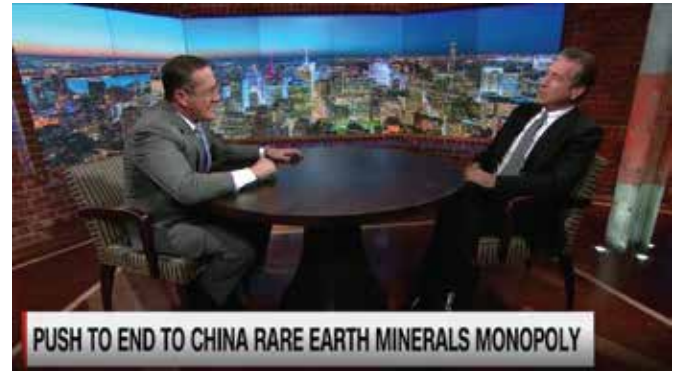


# American Elements Customers Include



# About American Elements CEO Michael Silver

Michael N. Silver is the founder of American Elements. He currently serves as Chairman of the Board & CEO. He established the company as a chemical manufacturing and metal refiner servicing companies mining deposits of high technology metals. In the late 1990s, he began acquiring direct strategic metal mining rights on behalf of the corporation, establishing a vertical supply chain from mine to high technology finished goods. He is considered a pioneer in the fields of nanotechnology, green technology and alternative energy sources.



Richard Quest interviews Michael Silver on US-China trade negotiations (image courtesy of CNN)



UCLA/Baotou Teaching Hospital Summit

Mr. Silver was the first American to establish a direct production and distribution supply chain from the rare earth mines in Inner Mongolia, China to North America, Japan, and Europe. He continues to be very active in the region, e.g. hosting a delegation from the UCLA Medical Center to the Inner Mongolian Medical Teaching Hospital for the purpose of establishing joint research and teaching and a joint AIDS treatment program (see image left).



Silver, Alaska Senator Dan Sullivan and Former Alaska Governor Sean Purnell attending the Alaska Strategic & Critical Minerals Summit

Mr. Silver has written editorials on high technology and geopolitics which have been published in the Wall Street Journal, the Financial Times, and the Huffington Post. He writes and speaks on issues affecting the global high technology industry, science education and Sino-American relations.

[See American Elements CEO Michael Silver explain the world of materials science to Cory Johnson of Bloomberg News](#)



CEO Michael Silver on CNBC's "Squawk Alley" (image courtesy of CNBC)

He is a trustee of the Los Angeles County Natural History Museum and a member of the Board of Directors of the Institute of Contemporary Art in Los Angeles, the Sarara Initiative in Northern Kenya, and on the Councils of the Getty Museum and the Getty Research Institute. He also sponsors "Science as Art," a competition during the Materials Research Society's annual meeting spotlighting the ability of technical images to transcend their functional use to become aesthetic objects of art in their own right.

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