

iz naših knjižnica

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American Elements

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American Elements (<http://www.americanelements.com>) američka je tvrtka, koja se bavi proizvodnjom i prodajom umjetnih materijala. Svoje su jednostavne mrežne stranice dobrom navigacijom pretvorili u koristan i pregledan izvor informacija o kemijskim elementima i spojevima, svojim proizvodima te novostima i zanimljivostima iz nekoliko vezanih odabranih tema.

Središnje mjesto na početnoj stranici zauzima interaktivni periodni sustav elemenata. Klikom na pojedini element dolazi se do detaljnijih podataka: ime na šest jezika, osnovne informacije o elementu (atomska struktura, rasprostranjenost u prirodi, vodljivosti, toplinska svojstva, izotopi – u tekstu i posebno u tablici pri dnu stranice), istraživanja i primjena određenog elementa i njegovih spojeva, sigurnosni podaci... Pri dnu stranice nalazi se kratak popis novijih radova o istraživanjima vezanim uz odabrani element. Do podataka o pojedinom elementu može se doći i odabirom iz prvog reda žutog izbornika s lijeve strane mrežne stranice.

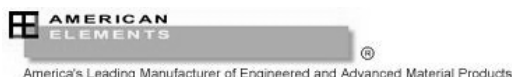
Pojedine riječi u svim tekstovima poveznice su na druge vezane sadržaje na tim mrežnim stranicama. Tako u tekstu o cinku (Zn) termin *Oxides* vodi na stranicu *Oxides Information Center* s detaljnim podacima o oksidima raznih elemenata.

Periodni sustav elemenata s početne stranice dostupan je na svakoj stranici o pojedinom elementu, što olakšava navigaciju.

S lijeve strane ekrana nalazi se popis svih proizvoda tvrtke koji sadrže odabrani element (npr. cink). Odaberemo li, primjerice, *Zinc Acetylacetonate*, dolazimo na stranicu s detaljima o proizvodu, njegovoj primjeni i osnovnim karakteristikama te poveznicom na online formular za upit o proizvodu.

Izbornik *Product groups* s lijeve strane sadrži informacije o dostupnim skupinama proizvoda, npr.:

- Nanoparticles, nanofluids and micronized powders
- Solutions
- Metals



Green Technology & Alternative Energy Information Center

Properties, Applications, Research, and Safety Guidelines
Sustainable Growth & Global Warming

Solar Energy, Fuel Cells, Nuclear Power, Wind Energy, Nanomaterials, Thin Film, Solid State Lighting

What is Green Technology?

The term "Green Technology" has been adopted over the last 5 years to identify a group of industries and industrial applications which exploit the commercial value of tech environment, particularly as it impacts the human condition. This basket of effected industries is quite diverse and includes businesses as far a field as energy and agricu product will someday be affected. Unlike the technological waves in recent decades, Green Technology is almost entirely materials science based. Ventures such as Goo rely on advances in material science for their success. But solar energy panels and pollution-free recyclable automobiles do.

Much of the coming green revolution also relies on the availability of "Alternative Energy" sources to both eliminate the emission of green house gases that cause global w resources we have on the planet perpetually "sustainable". Alternative Energy is defined as both energy sources other than mined hydrocarbons (e.g. solar energy in repla well as alternative methods to process mined hydrocarbons that are more efficient than current means (e.g. use of fuel cells in replacement of combustion engines).

What are the raw materials of Green Technology?

As stated, nearly all Green Technologies rely on the use of new advanced materials. These new materials vary from metals commonly used today in many ways. First, eler copper, tin, iron and carbon are stepping aside in favor of less common metals, such as zirconium, yttrium, tellurium and the 14 elements that make of the group of metals example, batteries that were once made of lead are now made of lithium.

Second, the purity of advanced materials can often be measured in atoms with ultra high purities up to 99.9999%.

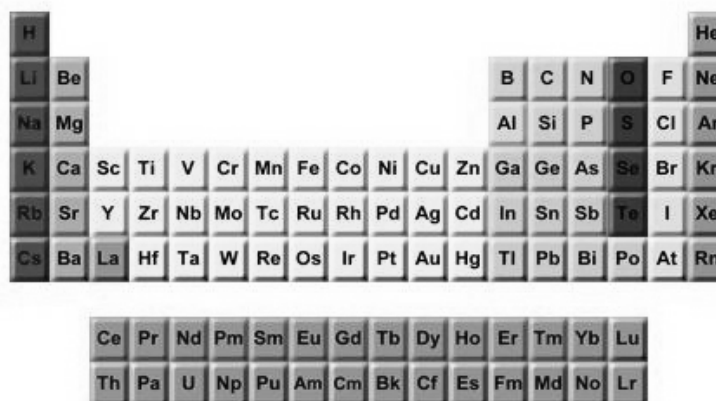


Next, the scale and size of the raw chemical and metallic powders may be as small as the nanoscale. "Nano" equals : nanometer is one-billionth of a meter. To appreciate the size, a human red blood cell is over 2,000 nanometers long, v For a given amount of material, as particle size decreases, surface area increases. Since the surface of any material b materials. the more surface area. the greater effect usina less material. It is not uncommon for one dram of a nanosca

Slika 1 – Početna stranica American Elements



Product Groups
Analytical Services ▾
Ultra High Purity
Nanoparticles, Nanofluids & Micronized Powders
Solutions
Metals
Alloys
Foils, Rod, Pellets, Wire & Targets
Rare Earths
Isotopes
Organo-Metallics
Semiconductors & Laser Crystals
Phosphors
Quantum Dots
Thin Film
Crystal Growth
Solar Energy
Fuel Cells
Water Treatment
Glass
Bromides
Fluorides
Oxides
Carbides
Chlorides, Nitrates & Sulfates
Analytical Services
Reference Calculator
Employment



(click an element)

Selected Hot Topics:

[Nanotechnology](#) - [Rare Earths](#) - [Green Technology & Alternative Energy](#)

[About American Elements](#) - [News](#) - [Tolling & R&D](#)
[Make American Elements Your Homepage!](#)

Registered Users

For expedited re-order, re-quote, or technical guidance:

User ID

How can I register as a user (optional)?

Slika 2 – Detaljnije o pojedinom elementu

BROMIDES INFORMATION CENTER

AE Bromides™

American Elements is a manufacturer and supplier specializing in the bromide form of most metallic elements including Cerium, Lanthanum, Erbium, Ytterbium, Neodymium, Yttrium and other rare earth elements, Gallium, Hafnium, Scandium, Niobium, Indium, Ruthenium, Zirconium, transition metals such as Copper, Nickel, Tin and Cobalt and precious metals such as Gold, Silver, Platinum and Palladium as well as other advanced elements. These bromide compounds are available as both powders and solutions and marketed under the trademark AE Bromides™.

The bromide form of any metal is generally soluble in water. Bromides are often used when the chloride or nitrate form is hazardous. This has become increasingly the case with the advent of new green chemistry and hazardous materials legislation such as the new REACH program in the European Union. For example, bromides are now being used in many catalytic, electronic, coating and biomedical applications in replacement of other soluble forms for this reason.

Bromide compounds are formed when a metallic cation binds with a charged (-1) bromine (Br) anion to form a bromide salt of that metal. Bromine is the only liquid halogen. Bromides were first prepared and used as sedatives which is why a "tired" expression or saying is sometimes called a bromide.

Purities include 99%, 99.9%, 99.99%, 99.999% and 99.9999% which are sometimes referred to as 2N, 3N, 4N, 5N and 6N.

Physical properties may include nanopowder, nano particle, submicron, - 325 mesh, rod, foil, and high surface area bromide with particle distribution and particle size controlled and certified. We produce larger - 40 mesh, - 100 mesh, -200 mesh range sizes and < 0.5 mm, 2 mm, 5 mm and other mm size shot, granules, lump, flake and pieces, too.

American Elements maintains industrial scale production for all its bromide products.

American Elements will execute Non-Disclosure or Confidentiality Agreements to protect customer know-how.

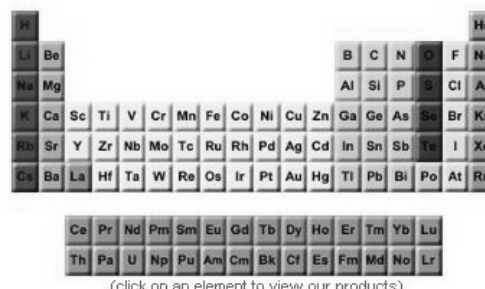
Please select from the table a Bromide Material:

Aluminum Bromide
 Antimony Bromide
 Barium Bromide

Cadmium Bromide
 Gallium Bromide
 Germanium Bromide

Neodymium Bromide
 Nickel Bromide
 Niobium Bromide

Silver Bromide
 Sodium Bromide
 Strontium Bromide



Slika 3 – Detaljnije o grupi proizvoda



America's Leading Manufacturer of Engineered and Advanced Material Products

Products

Zinc 2-Ethylhexanoate
 Zinc-66 Isotope
 Zinc-67 Isotope
 Zinc-68 Isotope
 Zinc-70 Isotope
 Zinc Acetate
 Zinc Acetate Solution
 Zinc Acetylacetonate
 Zinc Antimonide
 Zinc Arsenide
 Zinc(II) Arsenide
 Zinc Bars
 Zinc Bromide
 Zinc Carbide
 Zinc Carbonate
 Zinc Chloride
 Zinc Chloride Solution
 Zinc Colloids
 Zinc Disc
 Zinc Fluoride
 Zinc Fluoride Sputtering Target
 Zinc Foil
 Zinc Granules
 Zinc Ingot
 Zinc Iodide
 Zinc Lump
 Zinc Manganese Telluride
 Zinc Metal
 Zinc Nanoparticles
 Zinc Nanorods
 Zinc Nitrate
 Zinc Nitrate Solution
 Zinc Oxalate
 Zinc-64 Oxide Isotope



Zinc information, including Technical Data, Safety Data and its high purity properties, research, applications and other useful facts are discussed below. Scientific facts such as the atomic structure, ionization energy, abundance on Earth, conductivity and thermal properties are included.

Zinc is a bluish-white, lustrous metal. It is brittle at ordinary temperatures but malleable at 100 to 150 °C. It is a fair conductor of electricity, and burns in air at high red heat with evolution of white clouds of the oxide. It has unusual electrical, thermal, optical, and solid-state properties that have not been fully investigated. The metal is employed to form numerous alloys with other metals. Brass, nickel silver, commercial bronze, soft solder, and aluminum solder are some of the more important alloys. Large quantities of zinc are used to produce die castings, which are used extensively by the automotive, electrical, and hardware industries. Zinc is also used extensively to galvanize other metals such as iron to prevent corrosion. Zinc oxide is widely used in the manufacture of paints, rubber products, cosmetics, pharmaceuticals, floor coverings, plastics, printing inks, soap, storage batteries, textiles, electrical equipment, and other products. Zinc sulfide is used in making luminous dials, X-ray and TV screens, and fluorescent lights. The chloride and chromate are also important compounds. Zinc is available as metal and compounds with purities from 99% to 99.9999% (ACS grade to ultra-high purity); metals in the form of foil, sputtering target, and rod, and compounds as submicron and nanopowder.

Zinc facts, including appearance, CAS #, and molecular formula and safety data, research and properties are

available for many specific states, forms and shapes on the product pages listed to the left. Elemental or metallic forms include pellets, rod, wire and granules for evaporation source material purposes. Nanoparticles and nanopowders provide ultra high surface area which nanotechnology research and recent experiments demonstrate function to create new and unique properties and benefits.

Slika 4 – Dodatni materijali o odabranim temama

- Alloys
- Rare earths
- Isotopes
- Semiconductors and laser crystals
- Chlorides, nitrates and sulfates
- Glass
- Bromides itd.

Svaki naziv i opet nas vodi do stranice s detaljnim informacijama (npr. *Bromides Information Center*), na dnu kojeg je i ovdje popis novijih referencija na tu temu.

Reference calculator na dnu ovog izbornika daje tablice za preračunavanje različitih mjernih jedinica.

Na početnoj stranici, ispod periodnog sustava, istaknute su poveznice na nekoliko tema:

- Nanotechnology
- Rare Earths
- Green Technology & Alternative Energy

Tako tekst *Green Technology & Alternative Energy* govori ukratko o proizvodnji i tehnologiji "dobroj" za okoliš, materijalima koji se

upotrebljavaju u takvoj tehnologiji, problemu globalnog zagrijavanja te alternativnim izvorima energije, uz listu radova za daljnje informiranje.

Za korištenje mogućnosti *online* narudžbi proizvoda i detalja o proizvodima potrebno je registrirati se na početnoj stranici. Općenite informacije o tvrtki i njezinom poslovanju mogu se naći u:

- *About american Elements*
- *News*
- *Tolling & R & D*

U već spomenutom žutom izborniku s lijeve strane nekoliko posljednjih kategorija također sadrži informacije za potencijalne kupce:

- *Analytical Services* (o ostalim uslugama koje tvrtka nudi: kemijskim i strukturnim analizama, raznim mjerenjima...)
- *Employment* (kratke informacije o mogućnostima zapošljavanja)
- *Contact & Price Quotations* (online formular za upit o cijenama i sl.)

Iako dizajnom dosta jednostavne, ove mrežne stranice učinkovito pružaju mnogo kvalitetnih informacija svima zainteresiranima za kemiju.