

# TECHNOLOGY & INNOVATION

INDUSTRY	PRODUCTS	APPLICATION
<p><b>Nanomedicine</b> Surface-functionalized nanomaterials can form the basis of imaging reagents or targeted therapeutics.</p>	<p>Hollow nanoparticles for targeted drug delivery, Fluorescent nanodiamonds, Ultra- bright biological labels, Gold nanoshells, Silver nanoplates, Superparamagnetic iron oxide, Development and manufacturing services.</p>	<p>Drug delivery, Photothermal acne treatment, Photothermal cancer therapy, Histology.</p>
<p><b>Diagnostics</b> Identification of disease, illness, condition, contaminant or toxin to determine treatment</p>	<p>Bioready product line, Gold nanoshells, 40 nm gold nanoparticles, Magnetic gold nanoshells, Fluorescent particles, Diagnostics development, Development of custom probes.</p>	<p>Lateral flow tests, Point of care tests, Drug screening, Food product safety, Infectious disease testing.</p>
<p><b>Antimicrobial</b> Controllable silver ion release from our high-purity nanoparticles provides long-lasting antimicrobial properties</p>	<p>5 nm silver, Econix silver at 70 nm, Econix silver at 100 + nm to avoid regulatory hurdles, Coated silver for tunable silver ion release rate formulation, Integration of nanosilver into textiles, coatings and other products.</p>	<p>Wound care, Antifungal nail treatments, Antimicrobial surface treatments, Medical device treatments, Anti-odor treatments.</p>
<p><b>Cosmetic, Eyeware, Jewelry</b> Nanoparticle additives provide highly tunable color and optical behavior for integration into powder and liquid formulations</p>	<p>Silver and gold spheres, Tailored plasmonic particles including shaped silver, gold, Composite particles with multiple shells, Formulation and integration of optical materials into cosmetics.</p>	<p>Pigments makeup, UV filters (sunscreen), Enhancing penetration into the skin by encapsulation or suspending key ingredients, Optical effects where frequency response of both the absorbance and scattering is controlled separately.</p>



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<b>Nanotoxicology</b> Our precisely defined and highly characterized materials are international standards for determining environmental and health effects of nanoparticles	Purified and concentrated nanoparticles suspensions that are sterile and endotoxin free, Biopure product line, silver in particular, Tightly controlled size shape and surface, Integration of nanomaterials into experiments.	Toxicology experiments where a given parameter can be swept and all others held constant.
<b>Aerospace</b> Our nanomaterial integration methods produce composites that are lighter, stronger and provide dramatic performance increases	Self-healing polymers, Transparent conductive substrates, High thermal and electrical conductivity composites and fluids, High aspect ratio silver materials.	Self- healing composites, Capacitive screens, Lightning strike protection, Thermal management.
<b>Environmental Tracing</b> Potent tags for tracing	DNA tagged magnetite particles, Ultrabright fluorescent particles, Development of novel magnetically recoverable taggants.	Monitoring fracking process path Toxic water contamination Air contaminants
<b>Security</b> We engineer covert nanoparticle taggants with unique signatures that can be incorporated into a variety of products	DNA tagged particles, Covert upconverting nanoparticles, Infrared fluorescent particles, Particles with unusual opto-magnetic responses.	Means of authentication ie. currency, designer clothing, work ID badges etc
<b>Defense</b> Nanomaterial properties can be tuned and harnessed to revolutionize how we equip and protect defense personnel	High efficiency obscurants, Infrared decoys and pyrophorics, Plasmonic particles, High capacity low pressure drop filters, nanocomposite engineering, Aerosolization of particles.	Signature control, Personnel protection, Countermeasures.

