Objective
We seek customers who require advanced coatings and surface modification processes. We seek to develop and commercialize thin-film technology to improve products. We seek partners who want to create the best possible products in the market.

Mission Statement
Acree Technologies mission is to be a world-class thin film coating company. Acree creates and commercializes leading-edge coating technologies. Acree works with clients to develop proprietary coating solutions for their unique needs. Acree provides cost effective production coating services. Acree strives for 100% customer satisfaction.

Profile
Acree Technologies was founded in 2004 by a group of scientists formerly employed by large semiconductor manufacturers and national laboratories. Acree works with private industry, government agencies and universities in aerospace, medical and other high-tech industries. Acree specializes in thin film coatings applied using PVD (Physical Vapor Deposition). Acree develops coatings and deposition processes to improve the performance of a wide variety of products. Acree provides production coating services, research and development, materials characterization services, and coating equipment sales. Acree is registered to AS9100C and ISO 9001-2008.
Products & Services

Products
» Biomedical Coatings: Joint implants, Heart pumps, Catheters, Pacemaker electrodes
» Corrosion Resistant Coatings: Marine components, Food processing
» Electro-Optical Coatings: Anti-Reflective, Transparent Conductive Oxides, Electro-Magnetic Interference
» Erosion Resistant Coatings: Impellers, Turbine blades, Pumps
» Surface Modification: Plasma nitriding, Plasma carbonizing
» Temperature Resistant Coatings: Thermal Barrier Coatings for turbine engines, aerospace parts, and sensors
» Wear Resistant Coatings: Gears, Rotary components, Bearings, Tools
» Equipment Sales: Complete coating systems, Deposition heads, Power supplies

Application Areas
» Aerospace: Impellers, Turbine blades, High speed shafts, Bearing surfaces
» Aircraft: Landing gear tubes, Mounting structures, Electrical connectors
» Automotive: Fuel injectors, Valves, Cam components, Rocker arms
» Biomedical: Joint implants, Heart pumps, Catheters, Pacemaker electrodes
» Tool Industry: Drills, Punches, End mills, Cutting tools, Forming tools
» Oil Industry: Oil pipelines, Valves, Drills

Services
» Custom Coating Development: Coatings developed to solve unique problems and meet specifications required by clients in aerospace, biomedical, tool, and other industries
» Analytical Services: Materials testing and characterization for a wide variety of properties such as: adhesion, hardness, corrosion, wear, erosion, fatigue, electrical, optical, and morphology
» Production Coating Services: Acree solves your coating needs by coating your products in our facility. We work on the scale that is right for your business, from one piece up to a full scale production line
Core Competencies

Technology
» World leader in energetic deposition processes that create coatings with better adhesion, density and hardness

Acree has developed coatings for:
» Advanced Canopy and Window Materials for Improved Helicopter and Aircrew Survivability
» Infrared-Transparent, Millimeter-Wave Bandpass, Missile Dome Design
» Refractory Coatings on Mechanically Resilient Insulators
» Resistant Coatings for Aircraft Components
» Durable, Transparent Conductive Coatings
» Diamond-like Carbon Coatings on Polymers
» High Temperature Sensor Materials Optimization and Fabrication Methods
» Miniaturization of Sensors on Flexible Substrates
» Passive, Wireless Sensors for Extreme Turbine Conditions

R & D
» Development of coatings and surface treatments to improve performance of materials
» Computer modeling of materials properties
» Coatings that we have developed include:
  › Biomedical coatings for implants that are both wear resistant and lubricious
  › Corrosion resistant coating for pacemaker electrodes for heart implants
  › Erosion resistant coatings for high speed turbine blades and impellers
  › Electro-optical coatings for aviation windscreens, canopies, and windows
  › Multilayer optical coatings for high intensity discharge lamps

Production Coating Services
» The best coating solution to satisfy both technical and budget requirements
» The benefit of experience- our hard-earned knowledge ensures that we can meet your most demanding application requirements
» Value through fair pricing and consistent yields
» Quality control using appropriate testing and documentation
» Quick turnaround and on-time delivery
» Customer confidentiality and protection of intellectual property
» Scalable production capability
» Large capacity and throughput
» Work pieces up to 140 cm x 140 cm x 140 cm (55” x 55” x 55”)
Markets & Customers

Government
» Naval Air Systems Command - NAVAIR
» Naval Air Warfare Center – PAX, Cherry Point
» Missile Defense Agency – MDA
» Office of Naval Research – ONR
» Air Force Research Laboratories – Kirtland AFB
» Air Force Research Laboratories – Wright Patterson AFB
» Air Force Office of Scientific Research – AFOSR
» Defense Advanced Research Projects Agency - DARPA
» US Army Research Office – RDECOM
» Department of Energy – DOE
» National Science Foundation

Private
» BAE Systems
» Boeing
» Boston Scientific
» BP Oil
» Hamilton Sundstrand
» Heartware
» Honeywell Defense Division
» Lockheed Martin
» PPG Sierracin
» Pratt & Whitney
Core Advantage
» Research scientists with over 50 years combined R&D experience. Expertise in material science, coating technologies and plasma physics. Specialization in the deposition of thin films
» Research and development facilities including 9 vacuum deposition systems
» Analytical Testing Laboratory: Sophisticated testing lab including SEM, EDX, Profilometry, Ellipsometry, and Tribology equipment. Capable of materials analysis and characterization for a wide variety of properties such as: adhesion, hardness, corrosion, wear, erosion, fatigue, morphology, electrical, and optical
» AS9100 and ISO9001 Certifications
» Certified supplier for FDA Class III medical device company

Sustainable Competitive Advantage
» Patented coating technologies and equipment
» Working partnerships with key companies in the coating industry
» Highly developed relationships with significant users of coatings in numerous industries
» Copyrighted software for precise process control
» Experts in MEMS and NEMS technologies and applications
» State of the art facilities and equipment

Projects
Erosion resistant coatings for high speed impellers
Funding agency: Naval Air Warfare Center

High Temperature MEMS/NEMS thermal barrier coatings for turbine engines
Funding agency: DARPA

Advanced electrically conductive transparent coatings for aircraft windshields
Funding agency: Air Force Research Laboratories

Advanced electrically conductive transparent coatings for aircraft windshields
Funding agency: Air Force Research Laboratories

Nanostructured exchange coupled magnetic materials
Funding agency: National Science Foundation

Development of biocompatible corrosion resistant coatings for human implants
Funding agency: Private Corporate Funding

Partners
Lawrence Berkeley National Labs – A world leader in the development of nanotechnologies, coating processes and surface modification & characterization techniques

University of Nebraska – Leading university in the development & characterization of nanostructured materials

University of Cincinnati – Developed ASTM specs for erosion and wear testing of surfaces. Dedicated erosion testing laboratory.

Ohio State University – Advanced corrosion testing laboratory and corrosion resistant materials development program

University of California Los Angeles UCLA – Micro and nano fabrication programs and laboratories