

North Dakota Economic Development Center of Excellence for Surface Protection

North Dakota State University, Fargo, North Dakota, USA, offers a proven track record of expertise in coatings and polymeric materials, as well as in nanotechnology. In partnership and collaboration with private industry, NDSU researchers develop, test and deliver market-driven new hard and soft coatings solutions of value for industry.

Center of Excellence for Surface Protection

- performs economically significant and market-driven research
- develops surface-protecting coatings that address commercially relevant industrial problems posed by companies
- engages faculty and staff expertise of the NDSU Coatings and Polymeric Materials Department and the NDSU Center for Nanoscale Science and Engineering

Statement of purpose

NDSU's Economic Development Center of Excellence for Surface Protection (CSP)

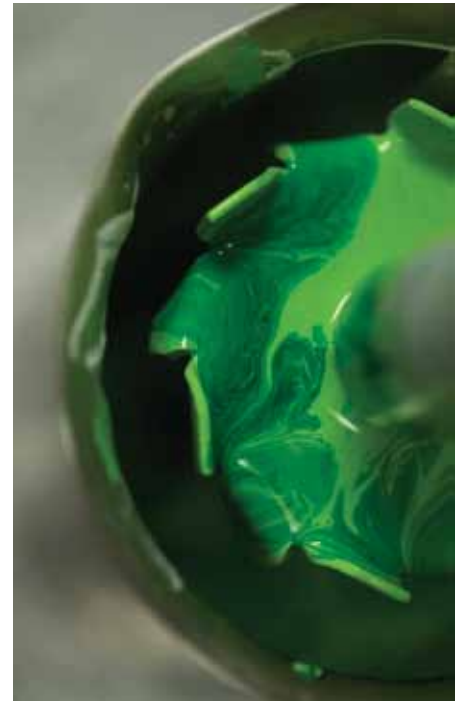
- assists industry partners in meeting product and technology needs with research that results in new marketable products and market opportunities
- promotes development of new products and technologies in the advanced manufacturing industry cluster
- enables commercialization opportunities
- focuses on market-driven research to produce high-value jobs and economic development opportunities
- fosters or promotes creation of private sector job growth
- engages NDSU in market-driven private sector partnerships

Current program partners

- Akzo Nobel Aerospace Coatings, Waukegan, IL
- Caterpillar Remanufacturing Drivetrain, LLC, West Fargo, ND
- INVISTA, S.à r.l., Wilmington, DE
- Marvin Windows and Doors, Warroad, MN
- PPG Industries, Inc., Pittsburgh, PA
- SpaceAge Synthetics, Inc., Fargo, ND
- Technology Applications Group, Inc., Grand Forks, ND
- United States Council for Automotive Research, LLC, Troy, MI

Components of the Economic Development Center of Excellence for Surface Protection at NDSU

- creates, designs and develops organic and inorganic coatings and application methods
- intellectual property development & licensing
- conducts specialty tests, measurements and analysis for industry clients to assist them in meeting their customers' needs
- accelerated exposure tests
- technical consulting services



NDSU

Potential market applications

- aerospace industry
- automotive sector
- biomedical products
- building materials and infrastructure
- shipping industry—steel industry

NDSU Dept. of Coatings and Polymeric Materials (CPM) Center for Nanoscale Science and Engineering (CNSE)

- perform high quality R&D for worldwide companies
- one of only six such academic programs in U.S. (CPM)
- conducts U.S. Department of Defense research
- expertise in aerospace coatings
- anti-corrosion expertise
- next-generation laser cladding processes
- specialty removable coatings for protection of artwork and statues



Technical experience & commitment to excellence

- international reputation of faculty and research staff in coatings & polymeric materials
- strong industrial experience component throughout staff
- credibility and quality in research—patent and licensing experience
- software for coatings formulation and design
- physical, chemical and engineering modeling experience & capabilities
- equipment development and design capabilities for high throughput screening
- sensor capabilities

NDSU Combinatorial Materials Research Laboratory

- houses more than \$11M in high-throughput instrumentation specifically designed for polymeric systems
- instrumentation for coating/corrosion testing
- comprehensive and powerful set of instrumentation for materials formulation
- enhances efficiency—conducting experiments in weeks rather than months
- develops novel polymers, coatings and formulations for marine applications
- develops novel polymers, coatings and formulations for biomedical applications
- inorganic coatings

For more information, contact North Dakota State University, Fargo, USA

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