MATERGENICS has a significant range of expertise and capabilities across multidisciplinary teams to address corrosion and materials concerns in the oil and gas industry and beyond. We also support companies manufacturing or constructing equipment, facilities or assets and those companies which own and deploy/use these items.

MATERGENICS’s Pittsburgh team focuses on providing solutions to our clients for failure prevention by providing risk assessment studies by NACE certified engineers; however when failures do occur we are your specialist partner for identifying potential causes and subsequently performing comprehensive analysis to determine root cause.

No matter your industry or product, MATERGENICS has the expertise to assist you with solutions. Our team of certified engineers and scientists will engage with your teams to ensure that you have the utmost confidence in our results by performing field inspections, risk assessments, corrosion mitigation through cathodic protection design and installation, failure analysis and materials testing. Our team has engineers that have been recognized by the International American Society of Metals (ASM) as well as the National Association for Corrosion Engineers (NACE) for outstanding contributions in material science.
Diverse Team of Materials, Engineers, Chemists, Electrochemists, Coating Specialists
- Solution Engineering
- Risk Assessment
- Process Problem Solving/Consulting
- Material Selection/Processing/Design Recommendations
- Contamination and Corrosion Analysis

Failure Analysis / Engineering Consulting
- Litigation Support
- On-Site Replication/ Metallurgical Evaluation
- Field Failure Investigations
- Fractography
  § Scanning Electron Microscopy
  § Elemental Dispersive X-ray Spectroscopy
  § Optical Light Microscopy

Metallurgical Evaluation
- Metallographic Preparation & Evaluations
- Ferrite Content
- Grain Size
- Inclusion Content/Inclusion Rating
- Macro Etch Examination
- Weld Evaluations
- Micro and Macrophotography

Corrosion Testing, Investigation, Simulation
- Mixed Flow Gas
- Salt Spray
- UV
- Electrochemical

Chemical and Mechanical Testing
- FTIR
- XRF
- XRD
- OES

Plastic, Polymer and Coatings Testing
- Surface Analysis
  - Auger Electron Spectroscopy (AES)

Concrete (Petrographic) Testing
- Welding, Soldering and Brazing Failure Analysis
- Non-Destructive Testing (NDT), Inspections
- Underground and Above Ground Testing
- Positive Materials Identification (PMI) Testing
- Filter Residue Analysis
- Ceramics Testing
- Third Party Inspections/Examinations
- Cathodic Protection Design, Installation & Monitoring
- Corrosion Inspection
- Soil Corrosivity Testing

FIELD & LABORATORY FAILURE ANALYSIS
MATERGENICS Pittsburgh has created a niche in the market by offering solution engineering and risk assessment of pipeline and other infrastructure, aerospace, manufacturing and other industries. We offer efficient and creative problem solving abilities, rapid turn-around times, and a fully equipped lab supported by a multidiscipline team of materials and corrosion engineers, chemists, electrochemical and micro-characterization specialists. MATERGENICS Pittsburgh also has a Ph.D. NACE Certified Corrosion, Coatings, Materials Selection and Design, Cathodic Protection Specialist.