





Scientists and engineers developing innovative solutions for aerospace, defense, and human health.

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#### Introduction

Lynntech **develops** and **delivers** advanced technology solutions for various industries.

The only way
to do great work
is to love
what you do.

#### **Customers and Partners**

- Aerospace
- Energy
- Defense & Security
- Healthcare
- Environmental Remediation

Our diverse team of scientists, engineers, program managers, business development personnel and other non-technical staff are dedicated to innovation, and passionate about delivering real-world **solutions**.



**75,000 sq. ft.** of combined administrative, research and production space.



#### History

Lynntech began operations in 1987, providing early stage scientific research and development for government-sponsored initiatives. Building on early successes, Lynntech expanded to address emerging industry and commercial market needs in energy, health, safety, industrial and environmental applications. Lynntech's infrastructure and capabilities have progressively expanded to include all the stages of research and product development, fostering the ability to transition early-stage technologies into advanced engineered solutions for various applications.

As Lynntech matured, there was a renewed focus to bring research breakthroughs into commercial markets. This has resulted in greater technology partnerships, allowing Lynntech-developed research to be a key element in emerging technologies targeted for commercial applications. Lynntech's product development and commercialization capability include: concept design, engineering analysis, prototype development, regulatory compliance, testing and validation, configuration management, market analysis, market positioning, manufacturing collaboration, and production.

#### **Facilities**

Lynntech is located in College Station, Texas. The company maintains 75,000 sq. ft. of combined administrative, research, and production space. The Lynntech facility provides significant technology support including: life-science labs, chemistry labs, assembly labs, testing labs, clean room, machine shop and additive manufacturing labs.

Lynntech is centrally located between four major metropolitan cities, with immediate proximity to dozens of leading medical and research universities.

#### Science and Engineering in Collaboration

Lynntech scientists and engineers work together to discover new ideas and to create solutions. Additional technical expertise and support is leveraged to help support prototyping, testing and to advance product development.



Our Mission



Lynntech

Technology Groups

**Life Sciences** 

**Energy and Power** 

**Intelligent Systems** 

**Materials Science** 

**Industrial Science** 

**Experimental Therapeutics** and Diagnostics

**Chemical and Environmental Science** 

Lynntech develops world-class technology solutions by organizing cross-functional teams around each technology challenge. Our scientists, engineers and program managers operate in a unique flexible environment designed to promote innovation and facilitate success.

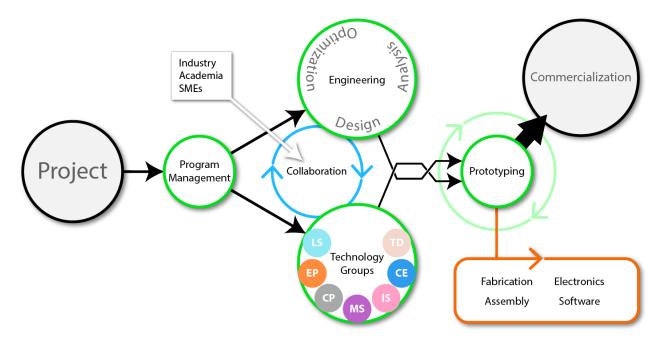
Lynntech identifies and recruits exceptional talent from across the globe. We look for professionals who have passion for both innovation and technology development.

# Execution Planning, managing and performing expert work.

#### Working Together to Bridge **Technology Development** with **Product Development**

Effective execution occurs when creativity and collaboration are fostered. Internal and external collaborations are established at all stages of development to ensure that expertise and knowledge are available to facilitate success.

Lynntech's Engineering Department actively collaborates with technology group personnel in order to transition technologies from the scientific stage to commercialization. Our Program Management Office (PMO) provides dynamic oversight to ensure all executions are performed within budget and on schedule. Lynntech also actively collaborates and communicates with customers to ensure that requirements are being met including verification and validation milestones. Lynntech meets customer needs by integrating creative talent, business expertise, and purpose-built facilities.



"...effective execution requires creativity and collaboration."



Lynntech scientists and engineers work together to discover solutions and foster innovation. Advanced engineering support is present at every stage.

#### **Engineering Support Resources**

Analytic Laboratories	Perform dedicated testing activities for streamlined and accurate data collection
Computational Modeling	Simulate complex physical systems for improved product design and development
CAD and Media Services	3D parametric CAD Design and documentation to aid in concept development, design and manufacturing
Instrumentation	Design and assemble custom electronics platforms including advanced algorithms, software and system firmware
Machining and Fabrication	Perform wide range of manufacturing activities using manual methods and computer controlled equipment
Additive Manufacturing	Rapid protoyping capabilities include Material Extrusion (FFF) and VAT photopolymerization

#### Life Sciences





Lynntech Life Sciences group provides research expertise in molecular biology, cellular biology, microbiology, and biochemistry. Through collaboration of these disciplines, we assemble diverse teams to execute biology-driven research. Utilizing proprietary software and advanced sensing units, we deliver diagnostic integrity for point-of-care interactions.

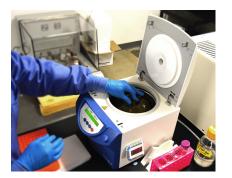
With partners in major research sectors, Lynntech plays a fundamental role in the creation, execution and promotion of innovative medical technologies.

#### Experience

Cellular and Molecular Biology, Pathogen Detection & Defense, Human Fluid & Blood Sampling, Environmental Sampling, Protein-Protein Interactions, Nucleic Acid Dynamics







Research in the Life Sciences focuses the development of innovative mechanisms to detect biological threat agents and pathogens, as well as genetic and proteomic biomarkers. Through our many collaborative efforts and vast research experiences in scientific areas such as Alzheimer's disease; epigenetics; phage, micro, and cellular biology, we have established a comprehensive program that brings Molecular Diagnostics to the 21st Century.

"Life Sciences excels in the field of biological agent detection and identification, as well as sensor-based data processing for human pathogen and genome recognition."

#### Focus Technologies

- Rapid Disease Diagnostics
- Biothreat Detection
- Point-of-Care Technologies
- Lateral Flow Analysis
- Peptide Discovery
- Nucleic Acid Analysis

- Exclusive Ligand Expertise
- Novel Nucleic Acid-based Technologies
- Extensive Assay Development Experience
- Innovative Sample Preparation Methods
- State-of-the-Art Laboratory Facilities

#### **Energy and Power**



Technology Group

The Lynntech Energy and Power group develops high-performance power systems and components for a range of demanding devices and applications. Using our core experience in fuel cells, electrolyzers, hybrid power systems and batteries, we develop energy and power solutions to meet unique customer requirements.

Our experience ranges from materials research and development to prototype design, development and testing. Energy and power components and systems have applications in aerial, undersea and land vehicles, as well as stationary and portable power systems.

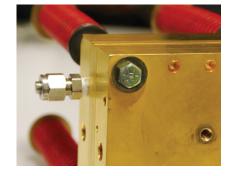
#### Experience

Catalysts and Electrodes, Membranes and Electrolytes, Membrane Electrode Assemblies, Gas Diffusion Layers, Bipolar Plates, Electrode Sheets

Proton Exchange Membrane Cells , Alkaline Cells, Solid Oxide Cells, Power Levels from 5W to 25kW+, Fuel and Oxidant Variants

Unmanned Undersea Vehicles, Unmanned Aerial Vehicles, Portable Power, Stationary Power, Custom Applications







Lynntech's fuel cells have been recognized by multiple aerospace prime contractors for their high power density and specific power. In addition, our reliable high-powered fuel cells have been targeted for use in unmanned undersea vehicles utilizing a hybrid system with custom power management algorithms.

#### Focus Technologies

- Fuel Cell Systems
- Fuel Cell Stacks and Components
- Electrolyzer Stacks and Components
- Regenerative Power Systems
- Hybrid Power Systems
- Energy Harvesting Systems
- · High Performance Batteries
- Ultracapacitors

- Fuel Cell Testing Equipment
- Extended Endurance Testing
- Small-to-Medium Scale Production
- Spray Coating Equipment
- · Clean Room for Manufacturing

#### Intelligent Systems



Technology Group

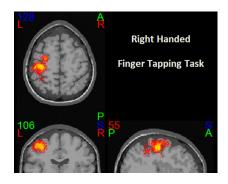
The Lynntech Intelligent Systems group innovates powerful algorithms and develops advanced sensory instrumentation which can extract actionable information from a sea of raw data. Complex electro-optical systems include innovative and custom-designed controls, circuitry, firmware and software. Our expertise in both computational sciences and sensing hardware allows us to exploit synergies between algorithms and hardware.

#### Experience

Enhance Capabilities of Existing Sensor Technologies, Combine Machine and Human Processing

Reduce Complex Data to Actionable Information, Reveal and Extract Noise Saturated Data







Our engineered solutions incorporate a variety of advanced technologies, including; electro-optical/infrared sensors, embedded navigation, hyperspectral imaging, biosignal monitoring and other related technologies. Real-world problems can be addressed using advanced methods such as; computer vision, anomaly detection, maritime search and rescue, perimeter threat detection and medical image processing.

"We can extract actionable information from a sea of raw data, helping the user meet mission objectives in the field."

#### Focus Technologies

- Machine Learning
- · Artificial Intelligence
- · Computer Vision
- · Mobile Computing
- Autonomous Systems
- · Anomalous Pattern Discovery
- Big Data Analytics

- Cloud Computing
- · Massively Parallel Computing
- · Multispectral/Hyperspectral Sensors
- Embedded Systems
- Optics Laboratory
- Avionics Interface and Simulation
- Scientific Computing Suites: MATLAB, Python, R

#### **Materials Science**



#### Technology Group

The Lynntech Materials Science group develops advanced materials with properties tailored to address the diverse needs of industry and research. We collaborate with academic and commercial experts to identify innovative solutions that are at the cutting edge of technology development and materials research.

Our efforts focus on materials and soft solutions towards improved human health, optical characterization and interrogation, biocompatible structures, functionalized substrates, biochemical sensing, reactive and protective fabrics, and nanomaterials for enhanced performance.

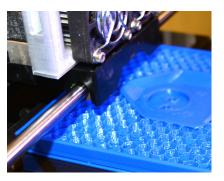
#### Experience

Conversion Coatings, Chromate-Free Coatings, Conductive Coatings, Superhydrophobic Coatings, IR-Amorphous Transparent Materials, Potassium Ferrate (K2FeO4), Ion Exchange Materials, Alternative Chemical Disinfectants, Electrolytic Passivation, Nanomaterial Synthesis, Surface Functionalized Materials, Layer-by-Layer Assembly, Chemical Deposition

Chem-Bio Protecting and Flame Resistant Textiles, Colorimetric & Reagentless Chemicals-sensing Fibers







Lynntech develops advanced materials with properties tailored for defensive and protective applications. We develop enhanced material solutions for a broad spectrum of applications. Among our successes are extended-life conversion coatings, biocompatible structures, functionalized substrates, biochemical sensing, colorimetric fabrics for chemical detection, and the development of dielectric nanomaterials for capacitors.

#### Focus Technologies

- · Nanostructured Materials
- Biomaterials (supporting therapy and wound care)
- Protective and Reactive Coatings
- Implantable Medical Devices
- Surface-Modified Materials
- Integrated Chemical Sensors and "Soft" Solutions
- Optical Instrumentation
- Additive Manufacturing (3D Printing)

- Fully Equipped Wet Chemistry Laboratories
- · Analytical Instrumentation, including
  - X-Ray Diffraction
  - Surface Area and Porosity Analyzer
  - Atomic Force Microscope
  - Gas Chromatography-Mass Spectrometry
  - High Performance Liquid Chromatography
  - UV-Vis and IR Spectroscopy
- Optics Laboratory
- · Rapid 3D Printing Capability

#### Industrial Science



Technology Group

The Lynntech Industrial Science group focuses on developing advanced and commercially viable systems to provide world-class solutions in various defense, aerospace, energy and medical applications.

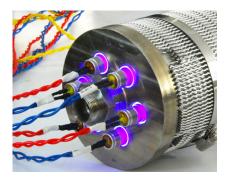
Our group members have proven experience in diverse areas of applied research and development critical to technologies surrounding materials development, nanomaterials and polymer nanocomposites, plasma systems, and additive manufacturing processes capable of enhancing and solving relevant issues in industrial processes. Technology solutions range from enhanced performance and maintenance for aerospace platforms to safety and remediation systems for personnel in hazardous environments.

#### Experience

Energy Efficient Combustion, Catalytic Cracking, Alternative Fuel/Chemical Synthesis, Heavy Hydrocarbon Upgrading,  $H_3$  and Syngas Production, Flow Separation Control, Nano-Particle Synthesis

Polymer Nano-Composites, IR-Amorphous Transparent Materials, Ion Exchange Materials

Surface Engineering and Modification, Material Functionalization, Flue Gas Clean-Up, Closed-Loop Rebreather Systems







Lynntech provides a wide array of solutions to many industries. We have provided significant research successes in combustion enhancement applications, fuel processing, energy production, food service, human health and emission control.

#### Focus Technologies

- Thermal & Non-Thermal Plasma Technologies
- Plasma-Assisted Catalytic Reactions
- Plasma Induced Electrostatic
- Agglomeration and Deflection
- Additive Manufacturing Technologies
- Plasma Integrated 3D Print Head Design
- Multi-material 3D Printing
- 3D Printing of Bio-medical Components
- Advanced Carbon Dioxide Separation and Sequestration
- Amine Modified Carbon Dioxide Sorbents
- · Anti-Fouling Membrane Technologies for Water

- 10W-10kW Plasma Power Sources
- RF & Microwave Generators
- Dielectric Discharge Reactions
- · Hollow Cathode Discharge Reactions
- 3D Printing and Polymer Extrusion Equipment
- · Plasma system Equipment
- Gas Chromatographs: MS, FID & TCD
- Powder X-ray Diffraction
- BET Surface Area Analyzer
- Wind Tunnel and Supporting Sensors
- Custom Multi-Gas Testing for Mixed Gas Analysis

## Experimental Therapeutics and Diagnostics



Technology Group

The Lynntech Experimental Therapeutics and Diagnostics group is involved in interdisciplinary research to develop novel diagnostics and therapeutics for identifying, monitoring and treating a variety of health conditions. We nurture a highly collaborative research environment where scientists from diverse fields such as chemistry, biomedical and chemical engineering, electrochemistry, molecular and cellular biology drive the innovation. We partner with major universities and commercial entities to develop innovative solutions to global health problems.

Lynntech seeks to translate molecular discovery into improved patient care by developing technologies that find applications in critical care medicine, pain management and personalized cancer medicine.

#### Experience

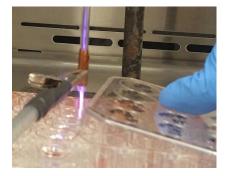
Wound Healing, Critical Care Medicine, Pain Management

Point-of-Care Diagnostics for Low Resource Environments, Apheresis Filters

Liquid Biopsy for Cancer Diagnostics, Novel Cancer Treatment Strategies to Overcome Therapeutic Resistance to Current Therapies







Lynntech applies cutting edge technologies in developing diagnostics, therapeutics and medical devices to address unmet and emerging global healthcare needs.

#### Focus Technologies

- Non-thermal Plasma
- · Self-regenerating Filter
- Microbial Decontamination
- Trauma Care
- Graphene-based Biosensors
- Oncology
- · Apheresis

- BSL 2 Microbiology Laboratory
- Mammalian Cell Culture Lab
- Molecular Biology Lab
- Device Design and Fabrication Support
- Electrochemistry Lab

### Chemical and Environmental Science



Technology Group

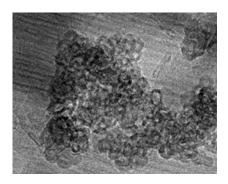
The Lynntech Chemical and Environmental Sciences group develops innovative and practical solutions for a wide range of industrial and environmental applications. Our focus includes both basic and applied research in electrochemical energy conversion and storage, catalysis, nanomaterials, sensors and coatings. Along with novel materials solutions in these areas, we also work closely with Lynntech Engineering to develop process and systems solutions for various technologies.

#### Experience

Electrochemical Oxygen Concentrators, Electrochemical Inerters, Biosensors, Water Desalination, Applied Electrochemistry, High Performance Membranes

Electrokinetic Remediation, Chemical and Plasma Reactors, Ultraconductive Composites, Industrial Coatings

Chemical and Nanoparticles Synthesis, Advanced Energetic Materials, Strategic Metal Recovery







We have additional experience in novel plasma processes for nanomaterials and chemicals synthesis, electrochemical applications of graphene materials, electroplating, biosensors, bioremediation and rare earth recovery.

#### Focus Technologies

- · Catalysis and Reaction Engineering
- · Rare Earth Recovery
- Bioremediation
- Desalination
- Electro-plating
- Composites
- Protective Coatings
- CO2 Utilization
- Nanomaterials Synthesis
- Application of Graphene

- 10W-10kW Plasma Power Sources
- Gas Chromatographs: MS, FID & TCD
- · X-ray Diffraction
- · ICP/AES, AA
- BET Surface Area Analyzer and Porosity Analyzer
- PAR Potentiostat

## Creativity Execution Collaboration

#### **CONTACT US**

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