Applied Plasma Innovations LLC

Advanced Plasma Technologies | Chemical Manufacturing | Research & Development

Company Overview

Applied Plasma Innovations (API) is a research and development company specializing in plasma-based chemical synthesis, advanced chemical production processes, and aerospace and defense propellant manufacturing.

API combines scientific expertise, systems engineering, and government program management experience to develop practical, scalable, mission-oriented solutions addressing specialty chemical production, supply chain resilience, and operational performance.

Core Competencies

Plasma Technology & Chemical Synthesis

- Plasma-chemical synthesis; high- and low-temperature plasma technologies, including plasma-activated water, toxic gas mitigation, plasma agriculture, waste gasification, fuel production, sensor development, and lunar mining
- Experimental design and engineering for space and terrestrial environments

Technical Program Management & Safety

- Government R&D program and project management
- Requirements development, risk management, and stakeholder coordination
- Specialty chemical handling, process safety, and supply logistics
- Technology transition planning and customer-driven development

Systems Engineering & Propellant Operations

- Engineered systems for aerospace, defense, and terrestrial environments
- Design, testing, and management of hypergolic propellant and high-pressure systems supporting 10+ payloads and spacecraft, including work with hydrazine, MMH, and MON-3
- Laboratory-scale proof-of-concept development and technology validation
- End to end Logistics Integration

Key Differentiators

- **Experienced Technical Leadership:** A multidisciplinary team of engineers, research scientists, and program management professionals with more than 35 years of combined experience across academia, government contracting, industry, and civil service.
- **Government and Aerospace Expertise:** Experience supporting complex government and aerospace initiatives, including mission requirements, operational constraints, and technology development.
- **Propellant Handling and Loading:** Subject-matter expertise in designing, building, testing, and managing hypergolic propellant and high-pressure systems, including fueling operations for ten payloads and spacecraft.
- **Specialized Plasma Capabilities:** Expertise in plasma chemistry, vacuum systems, chemical production platforms, and laboratory-scale experiments.
- **Mission-Driven Development:** Translating customer requirements into solutions through evaluation, prototyping, and testing.
- **Commercialization Focus:** Developing practical technologies that address customer needs, strengthen domestic production, and support resilient supply chains.

Relevant Team Experience & Past Performance

As an emerging commercial entity, API draws on its founding team's experience in government-funded R&D, aerospace engineering applications, experimental technology, and complex technical program management. This foundation supports technical execution, multidisciplinary collaboration, risk management, and customer-focused deliverables.

API is actively pursuing commercial and government opportunities in aerospace, defense, and specialty chemical manufacturing.

NAICS CODES
541715 | 541330 | 541690 | 541380

UEI / CAGE
R3JWRKYTTJN9 / 14NH9

CYBERSECURITY
CMMC Level 1; progressing toward NIST SP 800-171 and CMMC Level 2

WEBSITE
www.appliedplasmainnovations.com