

A cosmic background featuring a starry field with a prominent blue and purple nebula. A large, reddish-brown planet, likely Mars, is visible on the right side. Several smaller celestial bodies, including a crescent moon, are scattered across the dark space.

**NASA/MARSHALL SPACE
FLIGHT CENTER**

JOINT COUNSELING SESSION

Summit Information Solutions, Inc.

June 25th, 2020

Background

COMPANY NAME:	Summit Information Solutions, Inc.	ADDRESS:	HQ: 4870 Sadler Road Suite 102 Glen Allen, VA 23060 AL Office: 7067 Old Madison Pike, Suite 115 Huntsville, AL 35806
OWNER:	Shuganti Caradonna	CONTACT NAME:	Shuganti Caradonna
EMAIL:	shuganti.caradonna@summitis.com	YEARS IN BUSINESS:	18+ years
CAGE CODE:	46CR4	DUNS NUMBER:	126681084
WEB SITE:	www.summitis.com	NAICS CODES:	R&D: 541713; 541715; 541990 IT/PM/Engineering: 541330; 541511; 541519 More Available Upon Request
CERTIFICATIONS (e.g., ISO 9001, AS 9100, etc.): ISO 9001 and AS 9100 in progress (should be completed in next 60 days)			

Business Size & Classifications

EMPLOYEES (range):	10-50
AVERAGE SALES (range):*	\$1-7M

CLASSIFICATIONS (select from list below):	Yes/No
SMALL BUSINESS	Yes
SMALL DISADVANTAGED BUSINESS	No
NATIVE AMERICAN-OWNED	No
ALASKAN NATIVE CORPORATION	No
WOMEN-OWNED	Yes
ECONOMICALLY DISADVANTAGED WOMEN-OWNED	No
VETERAN-OWNED	No
SERVICE-DISABLED VETERAN OWNED	No
HUBZONE CERTIFIED	No
8(A) CERTIFIED	Graduated the 8(a) program
8(A) EXPIRATION DATE (if applicable)	N/A



Primary Capabilities

- Application specific functional thin films
 - Conformal, ultralight, pinhole free
 - Optics and E&M Sensors
 - High temperature / hostile environment protection
- Leaders in IT Consulting/Management
 - Business and Technology Modernization
 - Fractional COO, CIO, and CTO roles for Government and Commercial Customers
 - Portfolio/Program/Project Management SMEs

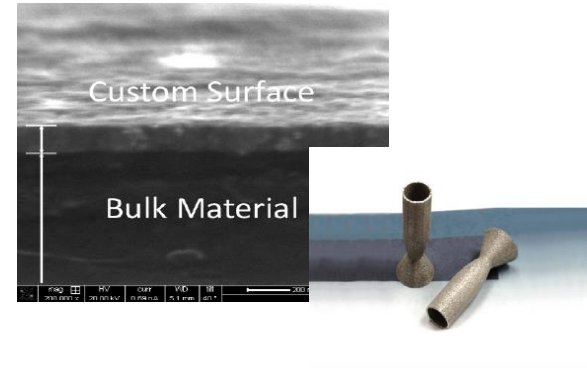


Current and Recent Contracts/Performance (< 5 years)

Material Encapsulation and Protection

- Functional surface layer for high temp. applications
- Functional surface high temp. Ox barrier

2 NASA Phase I SBIRs

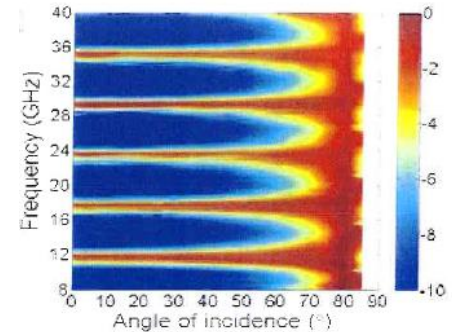


Optical Systems

- Thin film optical metamaterial development
- Metal dielectric stack material research and design

1 ARMY Phase and Phase II STTR

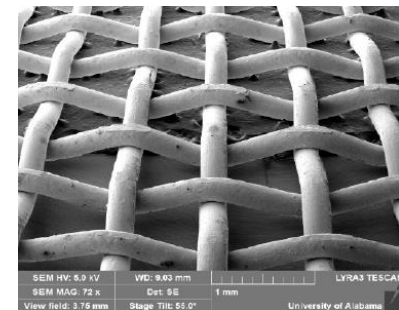
1 6.2 R&D Optical Development Contract



Catalyst Systems

- High aspect ratio catalyst bed material development
- Material use and cost reduction

Private Industry Development





NASA Value - Quad Chart

Problem(s):

- 3D printed parts, exotic material costs, and advanced propulsion technologies pose significant challenges and risks for future space flight
- ECLSS catalysts are necessary but expensive and challenging to 3D print
- Additively manufactured propulsion parts pose material requirement challenges
- NTP fuel and propulsion system require finely tuned material properties
- Artemis and further exploration will require environmentally hardened electronics

Summit Solution:

- Functionalized surface catalyst systems on 3D printed catalyst bed (ECLSS)
- Surface protection for propulsion components high temp oxygen and hydrogen environments
- NTP fuel powder can be preprocessed with extreme precision to create desired controlled reaction
- Thin ceramic encapsulation for electronics at component or board level for environmental hardening

Value:

- Reduce size, weight, and cost for any system that only requires surface functionality
- Decrease failure rate of 3D printed propulsion parts
- Conformal and extreme control (sub nanometer) of NTP fuel powder chemistries
- Environmentally ruggedized electronics without any appreciable weight increase. Reduce failure risk with now increase in launch weight

Status of Solution

- All our services are developed as an application specific solution. We do have some in-house solutions previously developed for customers
- Catalyst functionalization with noble metals has been successfully completed
- High temp oxygen barrier has been demonstrated on 3D printed 7,500 lbs. subscale engine (subcontractor)
- Thin film ceramic material has a robust chemistry that has not failed to adhere in a variety of tests, simply needs to be tuned for environment



Awards/Notable Accomplishments

- Named one of the “Best Place to Work in Virginia” by *Virginia Business Magazine* (2015 – 2020)
- 2019 Small Business Best Places to Work Silver Award (Huntsville/Madison County Chamber)
- 2018 Small Business Technology Company of the Year (Huntsville/Madison County Chamber)
- 2018 Patriot Award – Employer Support of the Guard & Reserve recognizing employers who provide outstanding patriotic support and cooperation to their employees
- 2017 Virginia Asian Chamber of Commerce Business of the Year
- 3D design work presented at Army Training and Education in the Digital Age session at Annual Meeting of the Association of the United States Army

Principle Point(s) of Contact

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