



SBIR Partnering  
Platform Newsletter

PARTNER Edition  
FY24 Q2

partnering  
... powered by DOE

Thank you for signing up to receive the [SBIR Partnering Platform](#) Newsletter!

## SBIR Partnering Platform

Developed in collaboration with Phase III awardee, [OmniSync](#), the [SBIR Partnering Platform](#) was released in October 2023. Open to all **Industry Stakeholders** (i.e., investors, service providers, utilities, etc.), this public, self-supporting platform facilitates partnering between SBIR/STTR small business applicants and awardees (**INNOVATORS**) and various industry stakeholders in their representative ecosystems (**PARTNERS**).<sup>1</sup> Partnering with an SBIR/STTR funded small business provides **PARTNERS** with immediate access to innovative, advanced technologies that have already been vetted through a competitive award process. **PARTNERS**, see features that need tweaking or critical information that is missing, reach out to [Carol Rabke](#).

If you haven't joined the DOE SBIR/STTR ecosystem – don't miss out! [REGISTER NOW!](#)

## virtual Partner Pitch Program (vP<sup>3</sup>)

In the last e-Newsletter, the schedule for the FY24 *virtual* Partner Pitch Program (vP<sup>3</sup>) was announced. Hosted by the Office of SBIR/STTR Programs, the Spring cohort, which consisted of twenty-eight (28) companies pitching in five (5) sessions, concluded on May 21<sup>st</sup>. Pitch sessions start again on Tuesday, August 6<sup>th</sup> with the launch of the Fall cohort.

View the complete schedule and abstracts here - <https://www.sbirpartnering.com/vp3/agenda> to register to attend pitches in August/September or log into the [SBIR Partnering Platform](#) to view the recording for any pitches for which you registered by visiting the **MY AGENDA** page under the **vP3 Pitch Program** drop down menu:

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<sup>1</sup> **DOE Disclaimer:** By enabling and publishing the DOE SBIR Partnering Platform, DOE is not endorsing, sponsoring, or otherwise evaluating the qualifications of the individuals and organizations that appear on this platform as partners, resources, awardees or innovators.

- My Agenda
- Full Agenda
- Search Pitches

## My Dashboard

### PITCHES YOU ARE ATTENDING

Session (ET)	Pitch Title
2:05 PM	Biobased, Sustainable, Lubricants, Environmentally Acceptable Lubricants (Eals), Base Oils
2:15 PM	Effective, Easy-To-Use, Polyethylene (Pe) And Polypropylene (Pp) Compatibilizer, Plastic Upcycling
2:25 PM	Green Nitric Acid, Low-Temperature Plasma,

**SELECT** the pitch of interest from the list of pitches you registered to attend. Then, select **VIEW RECORDING** from the pitch details page.

My Agenda / Full Agenda / Pitch Details

### < Biobased, Sustainable, Lubricants, Environmentally Acceptable Lubricants (Eals), Base Oils

Registration Closed

<b>Company</b> VBASE Oil Company, a subsidiary of Tetramer Technologies	<b>Location</b> Pendleton, SC	<b>Development Stage</b> Later Stage/Market Ready [TRL8-TRL9]
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Please note: this pitch session has already occurred.

**Abstract**  
Protected by multiple U.S. and global patents, this company has developed high-performance, sustainable lubricating base oils using biobased materials. These unique base oils provide enhanced oxidative and hydrolytic stability and built-in detergency compared to traditional base oils to help formulators build high-performance Environmentally Acceptable Lubricants. Addressing a \$4 billion market, the team has established kiloton manufacturing capacity and retained an industry-leading distributor for the North American market. The product has been substantially de-risked with early adopters, U.S. environmental registrations are complete, and EU REACH accreditation is expected 3Q 2024. EU distributor is established with a LOI in place. Having launched a Seed Round to accelerate global compliance, sales, and manufacturing, relationships are sought with investors and/or partners to bring the technology to the global market.

View Recording

To view the recording for pitches that have already occurred that you did not register to attend, simply request to view the recording from the pitch details page.

## Silicon-On-Insulator; Soi; Power Conversion; Rf; Semiconductor; Engineered Substrate; Capacitor

Registration Closed

Please note: this pitch session has already occurred.

### Abstract

My Agenda / Full Agenda / Pitch Details

### < Silicon-On-Insulator; Soi; Power Conversion; Rf; Semiconductor; Engineered Substrate; Capacitor

Registration Closed

<b>Company</b> Caporus Technologies, Inc	<b>Location</b> Columbia, MO	<b>Development Stage</b> Early Stage [TRL1-TRL4]
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Please note: this pitch session has already occurred.

**Abstract**  
This seven-year old company has developed advanced dielectrics enabling up to 10x improvement in energy and power density as well as reliable high temperature operation. These innovative material solutions disrupt both conventional capacitor manufacturing by improving manufacturing efficiency and performance in film as well as

power density as well as reliable high temperature operation by improving manufacturing efficiency and performance in film as well as for and semiconductor manufacturers, ou...

Request Access to Recording

View Details

Engage with vP<sup>3</sup> participants directly within the platform. To do this, choose **AWARD SEARCH** from your dashboard. Insert the name of the company of interest as a **KEYWORD**. Select 2 filters: **Phase** (insert Phase II, IIA, IIB and/or IIC) and **Has vP3 Pitch** (YES). Once you find the company of interest, click their company name to go to the **ORGANIZATION INFORMATION** page. *Mid-page*, you will find the points of contact and a button for **INSTANT MESSAGE**.

The screenshot shows the 'Award Search' interface. At the top, there is a navigation bar with 'My Dashboard / Award Search' and buttons for 'Keyword Search' and 'AI-Powered Recommendations'. Below this is a search bar containing the keyword 'caporus', which is circled in red. To the right of the search bar is a 'Clear Search Term' link. Below the search bar are several filter dropdowns: 'Industry Sectors', 'DOE Funding Program', 'Award Year', 'State', 'Phase (1)', and 'Has vP3 Pitch (1)'. There is also a 'Clear All' button and a 'Show 20 of 3 awards' indicator. The main content area displays the title of an award: 'Novel Insulators in Silicon on Insulator Substrates to Improve Nuclear Physics Sensors and Circuits'. Below the title, the company name 'Caporus Technologies, LLC' is circled in red, with a red arrow pointing to the 'Registered Users' section. This section lists two contacts: 'Carl T. Advisor | Caporus Technologies, LLC' and 'Kevin O. CEO | Caporus Technologies, LLC', each with an 'Instant Message' button. At the bottom of the contact list, the word 'Awards' is visible.

Questions or for a direct introduction to companies of interest, reach out to [Carol Rabke](#).

## vP<sup>3</sup> Participants Supporting the CHIPS Act of 2022

According to the Semiconductor Industry Association (SIA), the share of modern semiconductor manufacturing capacity located in the U.S. has eroded from 37% in 1990 to 12% today due to a lack of federal investments in chip research.<sup>2</sup> In July 2022, Congress passed the CHIPS Act of 2022 to strengthen domestic semiconductor manufacturing, design and research, fortify the economy and national security, and reinforce America's chip supply chains. The CHIPS Act of 2022 includes semiconductor manufacturing grants, research investments, and an investment tax credit for chip manufacturing.

Three companies pitched in the April 30<sup>th</sup> session highlighting technologies related to semiconductor manufacturing. Using the instructions detailed above, visit the [SBIR Partnering Platform](#) to check out pitch recordings from these participants with DOE SBIR funding. All of which are currently raising funds:

- [Caporus Technologies, Inc.](#) – This seven-year old company has developed advanced dielectrics enabling up to 10x improvement in energy and power density as well as reliable high temperature operation. Currently supplying engineered substrates to partnering

<sup>2</sup> <https://www.semiconductors.org/chips/>

capacitor and semiconductor manufacturers, our customers are able to replace their current capacitor solutions while reducing system complexity related to cooling, the number of support components, and the number of capacitors they need.

- [DUJUD](#) – This 5-year old semiconductor startup has developed a new class of heterogeneously integrated microelectronic systems enabled by proprietary micron-scale 3D flexible interconnects (3FIs) technology. The 3FI technology circumvents permanent wire bonds, tape bonding, and flip-chip bonding in modular circuits enabling upgradability at the chip level in multi-chip modules (MCM).
- [Pseudolithic Inc.](#) – Pioneering heterogeneous integration that combines diverse semiconductor elements at the chip scale to deliver breakthrough capabilities, this company is delivering integrated RF and mm-Wave products that provide next generation communications with unmatched performance. The company has successfully demonstrated high power amplifier components at frequencies relevant to Satcom and 5G\6G applications.

## FY23 SBIR/STTR Small Business of the Year

Each year DOE's Office of Small and Disadvantaged Business Utilization (OSDBU) recognizes a U.S. small business that exemplifies the spirit of DOE's SBIR/STTR programs by strengthening and expanding its high-technology research and development (R&D) competitiveness within DOE and/or the private sector. Competitively vetted with many worthy nominees, the awardee is to excel at one or more of the following criteria:

- Stimulating U.S. technological innovation and enhancing the nation's return on its DOE SBIR/STTR investment.
- Providing the DOE and/or its national laboratories, research facilities, or university research partners the benefits of commercial applications derived from DOE SBIR/STTR funded R&D.
- Stimulating U.S. economic growth and/or increasing private-sector commercialization of innovations as a result or in part of DOE SBIR/STTR funded R&D.

The EERE Water Power Technologies Office's nominee Tetramer (dba [VBASE Oil Company](#)) won the 2023 OSDBU award. Preparing to open their Series A round, VBASE Oil Company pitched in the May 14<sup>th</sup> pitch session. Interested parties can check out the recording on the [SBIR Partnering Platform!](#)

## NEW DOE Success Stories

This quarter we published two new success stories highlighting SBIR/STTR small businesses that are successfully generating revenue from the SBIR/STTR funded technology and/or received non-SBIR investment for continued development/commercialization.

- [Pixelligent](#), a Virginia-based startup that specializes in nanomaterials design and manufacturing, received funding through several government grants, including multiple SBIR awards. Initially focused on developing new materials for the semiconductor industry, Pixelligent's pivot to designing nano-enhanced additives for lubricants and increasing the refractive index of polymers using its proprietary nanoparticle design capabilities was made possible through DOE SBIR awards. Their innovative lubricant additive technology even earned several follow-on contracts from the Department of Defense. Pixelligent is currently

partnering with large commercial testing partners, including ExxonMobil and Infineum, to test and bring its products to the automotive and renewable energy markets, as well as the application of high refractive-index formulations for optoelectronic applications.

- [Nion Company](#), an electron microscopy startup acquired by Bruker Corporation in 2024, has made significant strides in materials science and biology through its cutting-edge scanning transmission electron microscopes (STEM). Founded in 1997, Nion's technology enables resolutions at the atomic level, leading to groundbreaking applications in energy conversion, storage devices, and other fields. The company's journey has included the development of advanced electron sources and innovative technical features funded in part by DOE SBIR grants. Through a series of successful Phase I and Phase II awards, Nion has been able to make key technological advancements, such as improving microscope brightness and stability. The company's strategic approach to product development, coupled with its focus on innovation and expertise, has positioned Nion as a leader in electron microscopy, with estimated annual revenues reaching \$10 million.

Read more about these successful awardees [here](#).

## Upcoming Events to Meet DOE SBIR/STTR Team Members

Members of the DOE SBIR/STTR programs team will be attending the [2024 Chemical Ventures Conference](#) in Chicago August 6<sup>th</sup> – 7<sup>th</sup> and the [2024 Energy Tech Venture Forum](#) hosted by the Rice Alliance on September 12<sup>th</sup>. It is an anchor event for the [Inaugural Energy and Climate Startup Week](#), happening the week of September 9<sup>th</sup> in Houston. Attending? Make sure to seek us out and say hello!