

COMPANY OUTLINES

IN CHEMISTRY, ADVANCED MATERIALS, ENERGY,
AGRISCIENCE & INDUSTRIAL BIOTECH



2020 DESCA Investor Forum

VIRTUAL FORUM

OCTOBER 21–22, 2020



DESCA Investor Forum 2020

DESCA held its first Green Chemistry Investor Forum in 2013 with a goal to connect angel investors and venture funds with emerging, high growth, pre-vetted companies.

Over the following 2 years, these companies collectively raised over \$25M in venture capital, secured development relationships or licensing deals with companies such as Shell, Koch Industries, Air Liquide, and GE, and/or underwent profitable acquisitions.

The ensuing Investor Forums, held in 2018 & 2019 brought a further 17 companies to the fore, which have since raised more than \$55M in funding and/or have entered into development agreements with Akzo Nobel, BASF and Cargill among others.

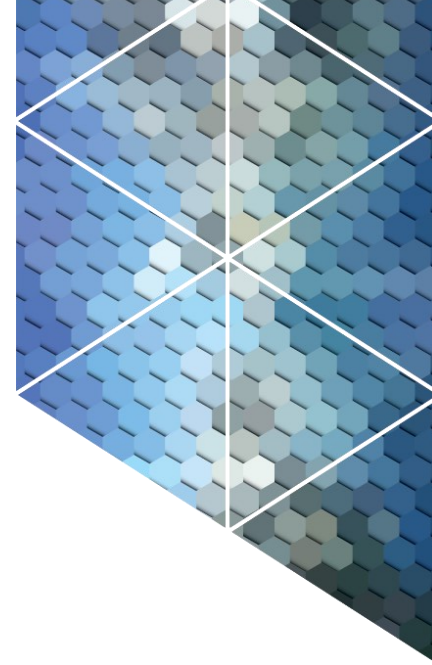
As in previous years, this invitation only venture forum is designed uniquely for qualified investors, corporate strategic funds and corporate innovation groups.

2020 has changed our landscape in many ways and this is reflected in this year's event. Please join us for our first ever **VIRTUAL forum** from the comfort of your own home or office and:

- Learn about 5 new startup companies innovating in sustainable technologies;
- Find out what some of our growing startups have accomplished since last presenting;
- Participate in a **CHEMICAL INNOVATION ECOSYSTEM WORKSHOP**, where stakeholders in this space will have the opportunity to participate in a discussion to help us—as a group—identify, discuss and propose solutions that will help small and large companies find a successful path to each other while meeting individual needs, and understanding the role that ventures can and cannot play;
- Network online with other startups and investors in our innovation community.

Please help us by taking just 2 minutes to answer these few brief questions that will form the basis of our workshop discussion! [LINK TO SURVEY](#).

Program of Events



October 21, 2020

9:00 am—9:15 am Welcome Message

9:15 am—10:00 am Startup Presentations:

[4th Phase Water Technologies](#)

[Biotrophics](#)

10:00 am—10:15 am Networking Break

10:15 am—11:00 am Startup Presentations

[Persea Naturals](#)

[Phase Sensitive Innovations](#)

11:00 am—12:00 noon Network & Connect; Presenter Breakout Rooms

October 22, 2020

9:10 am—9:15 am Welcome Message

9:15 am—10:00 am Startup Presentations:

[RiKarbon](#)

[SAS Nanotechnologies](#)

10:00 am—10:15 am Networking Break

10:20 am—11:20 am Startup Presentations

[Thrupore Technologies](#)

[Tric Robotics](#)

[W7energy](#)

11:20 am—12:30 pm Chemical Innovation Ecosystem Workshop

12:30 pm—1:30 pm Network & Connect; Presenter Breakout Rooms

Presenting Company Outlines

4th Phase Water Technologies



4th Phase Water Technologies is commercializing a polymer-free thin film platform. Based on the extraordinary properties of carbon nano tubes (CNT) and prepared from 4th Phase Water Technologies' own proprietary processes, polymer-free CNT films are flexible, durable and robust, resistant against organic solvents, acids/bases and extreme temperatures. When used as filtration membrane, polymer-free CNT films provide high flux rate, high capacity and selectivity to overcome challenges that current state-of-the-art polymer membranes fail to address. Being highly conductive, polymer-free CNT films are also extremely light weight, superior electromagnetic interference (EMI) shielding material.

Biotrophics (www.biotrophics.com)



Biotrophics is a biotechnology company that specializes in commercial production of proteins normally difficult to produce on an industrial level for use in agriculture, aquaculture, and human markets. These proteins can be used as amino acid sources for feedstock, active enzymes, vaccines/ diagnostics, or can be fragmented into bioactive peptides for pest & disease control. As a pipeline company, Biotrophics has identified several product candidates to commercialize, whilst first focusing on one: Lactoferrin, a protein found in mammalian milk.

Persea Naturals (www.perseanaturals.com)



Persea Naturals LLC was formed in 2006 with the dual ambition of (i) developing demand-driven natural food products and (ii) reducing America's waste problem. AvoColor, our initial product offering, is a yellow, orange, and red food color additive produced from the seed of the avocado. AvoColor addresses the growing natural food color need of food manufacturers. AvoColor will be manufactured in a concentrated, dry form of the color for sale to existing color suppliers. It has been quality tested by various food color companies, and is proven to be safe for consumption by multiple toxicology studies. We are now seeking FDA approval.

Phase Sensitive Innovations (www.phasesensitiveinc.com)



Phase Sensitive Innovations (PSI) is a high-technology, small business located in Newark, Delaware, that specializes in photonic devices for radio-frequency (RF) applications. In particular, PSI's main focus is on making RF-Photonic systems using its patented optical 'up-conversion' technology, which is based on highly efficient and high-bandwidth electro-optic modulators (EOMs) and photo-detectors (PDs). These systems can be used for a host of military and commercial applications due to their unique state-of-the-art performance and their integration into unparalleled RF systems. To this end, markets for PSI's technologies include the booming wireless communications market within the commercial sector, so called 5th Generation or 5G, as well as military operations that include communications, radar, and

surveillance. In addition, there is a growing and pressing need for enhanced civilian security systems that provide stand-off, and in some cases clandestine, screening of personnel, packages, and platforms. Each of these markets is experiencing exponential growth and the unique technology offered by PSI enables unequalled capability for each. Thus, it is PSI's focus to build a manufacturing capability that addresses and captures market share on all levels, e.g., device fabrication and manufacturing, system integration and deployment, as well as design, innovation, and licensing services.



RiKarbon (www.rikarbon.com)

RiKarbon is a growing startup with a mission to develop proprietary technologies and high-performance sustainable products from non-conventional, typically waste, feedstocks to meet growing consumer needs in the sustainable value-chain, capture value and create a long lasting societal impact. The company's initial product offerings include renewable emollients for cosmetics and base-oils for environmentally-acceptable lubricants. In addition to enabling technology development, product scale up and process optimization for initial product offerings, the company is rapidly expanding its technology portfolio to serve broader sustainability initiatives, e.g. waste plastics upcycling. The company has a dedicated and qualified management and R&D team, excellent commercialization, venture, business development and legal advisors, and a robust personnel plan to bring products and technology to the market.



SAS Nanotechnologies (www.nanotechnologies.com)

SAS Nanotechnologies has developed a smart microcapsule technology such that the microcapsules release chemicals inside them "on-demand" thereby opening unique solution opportunities to a variety of industrial problems in areas such as corrosion, lubricants, agriculture, sensors etc. The first target application ready for commercialization is anticorrosion coating. Our microcapsules-based anticorrosion coatings are not only environmentally friendly but also self-healing i.e. the coating will heal and protect the metal from corrosion in case of scratch or mechanical damage on the surface.



Thrupore Technologies (www.thrupore.com)

Enabling Sustainable Industrial Processes: ThruPore Technologies is a materials science company where we are using carbon engineering to drive sustainability in the chemical industry. The big problem with today's industrial chemical processes is that they have too many legacy issues with older designs including energy inefficiency and undesirable chemicals. New materials provide solutions to these sustainability challenges offering cleaner and greener chemical reactions that use less energy. ThruPore's unique *carbon only* catalysts in addition to our more traditional carbon supported catalysts enable low temperature processes that produce fewer by-products. In some cases, ThruPore's catalysts have been shown to cut CO₂ emissions by as much as 80%. Specific industry transforming data will be highlighted in this presentation.

Tric Robotics (www.tricrobotics.com)



TRIC Robotics is an AgTech company helping strawberry farmers achieve higher profitability with less work. Today, farmers spend thousands per acre on labor intensive tasks and harmful chemicals to combat insects, fungus, and other yield reducing pathogens. Our automated treatment platform combines proprietary Ultraviolet-C technology with robust field navigation software to replace pesticides and field labor. Our solution requires no input from the farmer and is the only organically accepted treatment for gray mold, one of the most yield damaging pathogens to the strawberry industry.

W7energy (www.w7energy.com)



W7energy will transform the future of energy and produce clean hydrogen at scale—reliably and affordably. Our innovative alkaline-based electrolyzer system introduces our new class of patented polymers. Using only pure water and renewable electricity, W7energy's cost-effective green hydrogen solution has the potential to substantially reduce over 36% of the global carbon emissions.

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