







### **MISSION**

Tetramer Technologies, L.L.C. was founded in 2001 on the principal that progressive materials solutions empower innovation in the world. Our focus is on early-stage, discretionary research and development that delivers inventive and enabling materials into a diverse marketplace. We perform synthesis and product development of applied materials having unique molecular architectures that meet targeted customer needs.

## SUPPORTING PRINCIPLES

- » Providing creative chemical syntheses leading to value-added molecular architectures
- » Determining fundamental structure/property relationships which provide monetized competitive advantages
- » Product development focused through intimate customer interaction
- » Process research to lower manufacturing costs and improve quality
- » Providing technical transfer packages for production scale up

### **VALUES**

Creative new ideas establish valuable competitive advantages for us and our customers. The work of turning ideas into mutually beneficial value propositions is an energizing internal and external team activity. We believe mutual success comes from personal enjoyment of customer interactions based on integrity, ethics, open technical communications and good personal relationships.

### **PRODUCTS & SERVICES**

Tetramer focuses on joint research and development relationships, allowing us to generate mutual sustainable commercial value in the shortest time practical. With an initial focus on optical materials, Tetramer quickly expanded into early stage R&D across a range of materials systems and applications. With diverse expertise in materials science, synthetic chemistry, and chemical engineering, Tetramer develops materials solutions for real-world problems in a wide range of applications and technologies. Tetramer is currently developing products and manufacturing processes for material structures in five key materials platforms:

#### **POLYMERIC MEMBRANES**

- » Proton Exchange
- » Water Vapor Transport
- » Electrolyzer
- » Gas separation

# POLYMERS FOR FIBER OPTIC SYSTEMS

- » High Temperature, Low Refractive Index Coatings
- » Ultra-High Temperature Polyimide Coatings
- » UV-Curable Index Matching Adhesives

# NANOCOMPOSITE DEVELOPMENTAL RESEARCH

- » Tamper Indicating Coatings
- » Radiation Detection
- » Phosphor Encapsulation

#### **BIORENEWABLE MATERIALS**

- » Industrial Bioproducts/Coatings
- » Low Calorie Fat Substitutes

# JOINT PROPRIETARY PRODUCT DEVELOPMENT





## **GOVERNMENT CUSTOMERS/PARTNERS**

- » Naval Air Systems Command (NAVAIR)
- » Office of Naval Research (ONR)
- » Department of Energy (DOE)
- » National Science Foundation (NSF)

- Joint Technology Office (JTO)
- » Defense Threat Reduction Agency (DTRA)
- » Savannah River National Laboratories
- » Sandia National Laboratories

### **COMPANY PROFILE**

Tetramer Technologies, L.L.C. was founded in May 2001 to commercialize specialty optical polymeric materials. The company, located in South Carolina, has five owner/members and is privately held with no debt and has had significant growth in revenues in both commercial and government business. Dr. Earl H. Wagener, former Director of Research and Development at Dow Chemical and Vice-President of Research and Development at Stepan Company, serves at Tetramer as an owner/member and CEO. Tetramer currently has 32 employees, with 14 PhD, 5 MS and 8 BS and 5 Undergraduate co-ops and/or part-time employees. A Business Development Team with more than 100 collective years of diverse product development experience manages the operation of Tetramer's research and development.

### **FACILITIES**

Tetramer's facilities, located in Pendleton, SC, houses more than 7,500 ft<sup>2</sup> of laboratory space furnished with 20 chemical hoods, fully-equipped reactors ranging from 1 to 100 liters, a Class 1000 cleanroom, environmental chambers, and much more. Tetramer's state of the art in-house analytical capabilities include:

# CHEMICAL/PHYSICAL CHARACTERIZATION

- » Chromatography (HPLC, GPC, GC)
- » Rheological Testing
- » Universal Mechanical Testing
- » Particle Size Analysis (DLS)
- » Gas Permeation Testing

#### THERMAL ANALYSIS

- » Thermal Gravimetric Analysis
- » Differential Scanning Calorimetry
- » Thermal Mechanical Analysis

#### **OPTICAL CHARACTERIZATION**

- » Spectrometry (UV/Vis and FTIR)
- » Fluorescent Spectroscopy
- » Abbe Refractometry

# ELECTRICAL CHARACTERIZATION

- » Ferroelectric Hysteresis
- » Dieletric Breakdown



## **CONTACT INFORMATION**

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