



# Lamellar Zeolites (20110222, Dr. Michael Tsapatsis)

Technology No. 20110222

**IP Status:** Issued US Patent; **Application #:** 13/288,595

## Superior Catalytic and Molecular Sieve Applications

A method has been developed to synthesize zeolites in a lamellar morphology with thinner layers than can be produced using alternative techniques. The zeolites are produced at lower cost than alternative methods and can be used as catalysts, as coatings for molecular sieve membranes and as low-dielectric constant materials in electronic applications.

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## Nanometer Thick Lamellar Zeolite Layers

The lamellar zeolite structures are layered crystalline materials with porosity within layers as well as across layers. As such, catalysis and separation can take place at pores on both the surface and within the layers. With the produced layers less than a nanometer thick, the method produces materials with superior catalytic and molecular sieve functions at a lower

cost than currently available technology.

#### **BENEFITS OF LAMELLAR ZEOLITES:**

- Thinner layers lead to superior catalytic and molecular sieve functions.
- Lower cost to produce than alternative methods.
- Potential use as low-dielectric constant material in microelectronics applications

**Fulfillment Details** Licensee will receive rights to practice the intellectual property (Patent application) for the purposes of developing and manufacturing a commercial product.

**Phase of Development** Preparation method has been developed and tested on laboratory scale.

#### **Researchers**

Michael Tsapatsis, PhD

*Department of Chemical Engineering and Materials Science*

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