

## MATRL 265 Class 10: Molecular clusters

We will discuss examples of large molecules and clusters in solids, as well as layered solids, that by their very architectures, display quantum size effects. The examples are of optical quantization.

**Layered hybrids** D. B. Mitzi, K. Chondroudis, and C. R. Kagan, Organic-inorganic electronics, *IBM J. Res. Develop.* **45** (2001) 29-45. [DOI](#).

**Zeolitic semiconductors** N. Zheng, X. Bu, B. Wang, and P. Feng, Microporous and photoluminescent chalcogenide zeolite analogs, *Science* **298** (2002) 2366-2369. [DOI](#).

**Supertetrahedral clusters** W. Su, X. Huang, J. Li, and H. Fu, Crystal of semiconducting quantum dots built on covalently bonded T5  $[\text{In}_{28}\text{Cd}_6\text{S}_{54}]_{-12}$ : The largest supertetrahedral cluster in solid state, *J. Am. Chem. Soc.* **124** (2002) 12944-12945. [DOI](#)