MAR06-2005-007135

Abstract for an Invited Paper
for the MAR06 Meeting of
the American Physical Society

New Approach Towards Aqueous Functional Nanostructures via Amphiphilic Coordination Networks

JUAN NOVERON, University of Texas at El Paso

The unprecedented use of designed amphiphiles with coordination- capable head groups that allow for the traditional coordination- directed networks to further self-assemble into nanostructures with novel complexity and function will be presented. With this approach the versatile chemistry of transition metals and the properties that amphiphiles exhibit in aqueous media are combined to generate extraordinary materials with interesting functions such as gene-encapsulation and delivery, drug- delivery vehicles, and hydrogen storage materials.