

## **85f Self-Organization of Nanowires from Nanoparticles**

*Nicholas A. Kotov*

It was previously established experimentally that, semiconductor nanoparticles possess significant dipole moment. Under specific conditions, such as removal of substantial portion of the stabilizer layer, the dipole moment affords self-organization of NP in chains and later in nanowires. The mechanism of the formation of dipole moment in seemingly anisotropic nanoparticles was established. The mechanism of the self-organization was modelled by Monte-Carlo method. Parameters of the nanoparticles such as total charge and dipole moment were calculated. It is concluded that at short separations, the interactions between the nanoparticles are unusually strong.