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Ramanathan Nagarajan

Wednesday, March 30, 2011

**431 - Aqueous nanocarbon dispersions for electronic and energy applications**

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Microemulsion polymerization was used to prepare nanolatexes using a reactive ionic liquid surfactant (ILBr) and methylmethacrylate (MMA). Such nanolatexes have high affinity for nanocarbon and graphene surfaces and can be used to stabilize various forms of nanocarbon in an aqueous environment. Such dispersions are expected to lead to primary fuel feeds for carbon-based fuel cells. Introductory results are demonstrated for dispersing single wall carbon nanotubes, multiwall carbon nanotubes, and hydrothermally produced nanocarbon at practical concentrations of 1-11% by weight in aqueous dispersion! We present optical criteria useful for establishing complete exfoliation. Electrical conductivity, and thermal conductivity properties are presented and discussed.

**Wednesday, March 30, 2011 02:00 PM**[Nanoparticles and Nanostructured Materials for Energy Applications \(02:00 PM - 05:15 PM\)](#)**Location: Disney's Grand Californian Hotel****Room: Sequoia Blrm F**

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