

Milestones in Synthesis, Dispersion, and Applications that Realized Single-walled Carbon Nanotubes Industrialization

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Abstract

After two decades of extensive research, single-walled carbon nanotubes (SWNT) are going to be industrialized at last. By the time of the conference, Nippon-Zeon will have announced that they will launch the first commercial SWNT production plant based on the super-growth technology in 2015. Concurrently, a couple of applications such as SWNT super-capacitors and composites would hit the market. To realize this, not only the development of mass production technique was necessary but also new concepts in CNT dispersion were crucial to keep the length of the long SWNTs and development of new application were required. Indeed, I envision that the “first” SWNT industrial applications are going to be very different from what we researchers had thought CNT would be useful for. In this talk I will present milestones, new concepts, new directions and aspects in synthesis, dispersion and applications of long SWNTs that have led to industrialization.