A road to carbon nanotube application and commercialization

Shoushan Fan
Department of Physics & Tsinghua-Foxconn Nanotechnology Research Center, Tsinghua University
Contact e-mail: *fss-dmp@tsinghua.edu.cn*

Super-aligned carbon nanotube(SACNT) arrays, films and yarns are materials that are made of pure and high quality carbon nanotubes, and have found applications in consume electronics, batteries, sensors, heaters, filters, chemical industry, and biomedical. But the prerequisite for any real products is the capability of producing these materials with stable and well defined quality, especially the SACNT arrays, as the SACNT films and yarns are dry spun form them and their qualities relies on that of the former. We have defined more than 10 quality specifications for SACNT arrays and thin films, and have developed specialized quality inspection equipment for production purpose. Unlike laboratory facilities (electron microscopes, for instance) that take long time to analysis micro scale samples, our equipment examine 8-inch-wafer sized SACNT arrays within minutes, thus provide fast feedback for inline quality control. These quality inspection equipment have brought consistent and high quality SACNT array production into practice. Base on that, SACNT touch panels production lines have been built and products were manufactured and went into market.