

Standardization on carbon nanotubes

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When carbon nanotubes (CNTs) were introduced in 1991, the public were fascinated by their possible applications in many industry fields. However, no sooner had scientific knowledge been accumulated than technical bottleneck was appeared. Generally there exist two main problems, which obstruct practical applications of CNTs, such as dispersion and inhomogeneity in regard of electrical conductivity. In spite of these drawbacks, there have made many efforts how to apply this noble nanomaterial for practical usage and how to accelerate its industrialization. One of these efforts is standardization of CNTs.

In this presentation we are going to report our attempts to formulate an international standard which can categorize CNT products in terms of electrical property. Our standardization activity has been being discussed in IEC TC 113 and ISO TC229 since in 2007 under the title of “Technical Specification for the Electrical Characterization of Carbon Nanotubes (CNTs) Using 4-Probe Measurement”(Project number : PT62607). This specification contains two parts such as sample preparation and measurement methods. If this technical specification is completed, CNT manufacturers can use this standard method to evaluate their products and include the result in MSDS. More detail information on this project and discussion so far made in ISO TC229 and IEC TC113 will be introduced and further discussed.

For reference,

IEC : International Electrotechnical Commission

ISO : International Organization for Standardization

TC : Technical Committee

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