

## **Inorganic-Organic Hybridized Nano-Composites for Supercapacitors**

- K. Naoi (Tokyo University of Agriculture & Technology)

The author's group has been investigating novel electrode materials for supercapacitors and hybrid electrolytic capacitors. The materials are nano-composites of carbon-supramolecule and metal oxide-supramolecule both of which show both high capacity density and excellent cycleability.

As one of the examples, an electroactive supramolecular oligomer coated on nanometer-ordered carbon materials will be introduced and their feasibility as the next-generation material will be discussed in the presentation. The nano-composites consist of acetylene black (AB) or vapor growth carbon fiber (VGCF) coated with the  $\pi$ -stacked supramolecular oligomers of 1,5-diaminoanthraquinone(DAAQ) or tricyclic indole(TCI).

As an another example, RuO<sub>2</sub> core-supramolecule shell nano-composites will be introduced as a high-rate material for the next-generation supercapacitors.