

Evaluation of the Dispersiveness of Conductive Polymer (Clevios™ PEDOT / PSS)

Particle Size Distribution Measurement with NANOTRAC WAVE II

Overview

Conductive polymers are functional materials used extensively in the development of next-generation products such as touch panel films (indispensable in modern life), dye-sensitized photovoltaic cells (organic photovoltaic cells) which can be installed in various places (unlike conventional photovoltaic cells), and organic EL (electroluminescence) devices (used for lighting and display). An example of the evaluation of a representative conductive polymer Clevios™ PEDOT / PSS by means of particle size distribution measurement is presented below.

Materials

- Clevios™ P

A dispersion of PEDOT / PSS in water, with the particles assuming the form of submicron size gel. Utilized in organic EL devices and as electrodes of organic photovoltaic cells.

- Clevios™ PH500

A dispersion of high-conductivity PEDOT / PSS, assuming the form of monodispersed particles with a size of tens of nm. Utilized in organic EL devices and as electrodes of organic photovoltaic cells.



Apparatus

Name: Particle Size Distribution Measurement System Nanotracs Wave Series

Model: Nanotracs Wave UT151

Principle of measurement: Dynamic light scattering (DLS) / Frequency analysis

Range of measurement: 0.8-6.500nm

Results

Measurement of Clevios™ PH500 assuming the form of submicron size gel yielded the values and distribution expected.

Material	Clevios™ P	Clevios™ PH500
Mean particle size	443.8 nm	12.6 nm

