[월 MATERIALS



Metallo-Supramolecular Polymer with Electrochromic Properties



Poly(Fe-btpyb) Purple 1g [P2789]

Advantages

New

- Displays keen color change upon applying voltage (electrochromism)
- Maintains the displayed color while power off (memory effect)

Application

Potential applications toward light control glass and light control film



Related publication M. Higuchi, J. Mater. Chem. C 2014, 2, 9331.

This product was developed for research and development use. Please contact National Institute for Materials Science (NIMS), Japan. (contract_administrator@nims.go.jp) if you purchase it for purpose of industrial use.

Electrochromism

Mechanism of Chromism

Poly(Fe-btpyb) Purple is a purple powder. The color is caused by an absorption around 580 nm of metal-to-ligand charge transfer (MLCT) transition from Fe(II) to the ligand. The MLCT absorption disappears by the electrochemical oxidation of Fe(II) to Fe(III).¹



¹⁾ Working: an ITO glass coated with Poly(Fe-btpyb) Purple Counter: Pt wire; Reference: Ag/Ag+; Electrolyte: an acetonitrile solution with LiClO₄



Cycling characteristics of transmittance change



All the pictures and deta were provided by National Institute for Materials Science (NIMS), Japan.

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