Synthesis of Fluoro-functional Conjugated Polymers by Electrochemical Methods

Shinsuke Inagi
Department of Electronic Chemistry, Tokyo Institute of Technology
4259 Nagatsuta, Midori-ku, Yokohama 226-8502, Japan
inagi@echem.titech.ac.jp

Electroorganic synthesis is a powerful modern synthetic tool used in organic reactions and polymerizations. In this study, we synthesized novel conjugated polymers having 9,9-difluorofluorene unit by electrochemical polymer reaction [1].

We investigated the gradient modification of an azide-functionalized conducting polymer film (PEDOT-N₃) via electro-click reaction in the presence of perfluoroalkyne using electrogenerated Cu(I) species on a bipolar electrode. The catalyst Cu(I) generated at the cathodic side of the bipolar electrode with a concentration gradient, which would affect the density of the modifier introduced [2].

References