Supporting Information

Conductive Polymer-Mediated 2D and 3D Arrays of Mn_3O_4 Nanoblocks and Mesoporous Conductive Polymers as Their Replicas

Yoshitaka Nakagawa, Hiroyuki Kageyama, Riho Matsumoto, Yuya Oaki, and Hiroaki Imai*

Department of Applied Chemistry, Faculty of Science and Technology, Keio University, 3-14-1 Hiyoshi, Kohoku-ku, Yokohama 223-8522, Japan

Email: hiroaki@applc.keio.ac.jp

Additional figures

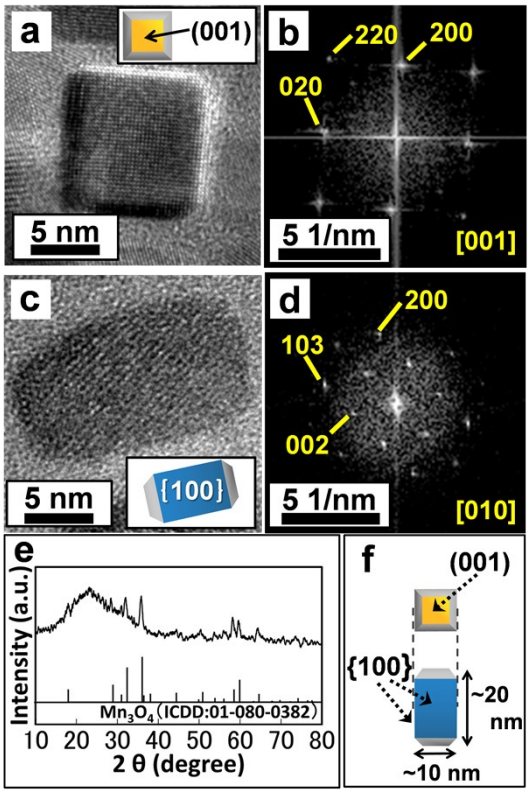

Figure S1. HRTEM images and FFT patterns corresponding to the lattice fringes of Mn_3O_4 rectangular nanoblocks with a projection direction of [001] (a, b) and [100] (c, d). XRD pattern of the product (a broad halo at 20–30 degree is ascribed to a glass holder) (e). Schematic illustration of a standard Mn_3O_4 rectangular nanoblock (f). Reproduced with permission from ref. 15. Copyright 2014 American Chemical Society.

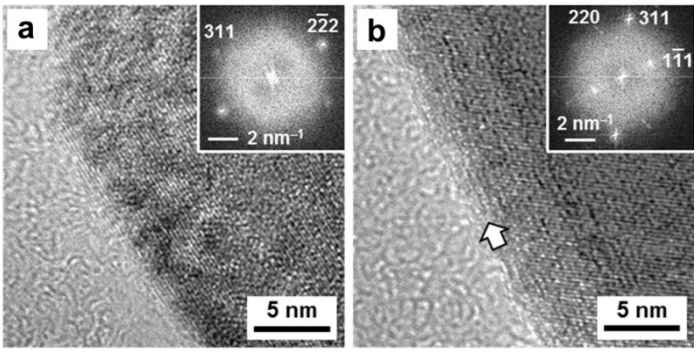

Figure S2. HRTEM images and corresponding FFT patterns of a commercial $Li_4Ti_5O_{12}$ (a) and the PPy-coated samples (b). Reproduced with permission from ref. 36. Copyright 2014 Royal Society of Chemistry.

While the lattice fringes of the $Li_4Ti_5O_{12}$ were observed throughout the nanocrystals before the PPy coating (Figure S2a), the thin amorphous layer 1 nm in the thickness was partially formed on the nanocrystals (indicated by a white arrow in Figure S2b).