

Supporting Information for

Fabrication of Polyaniline/MoS₂ Nanocomposite using Self-Stabilized Dispersion Polymerization for Supercapacitors with High Energy Density

Minkyu Kim,[†] Yun Ki Kim,[†] Jihoo Kim,[†] Sunghun Cho,^{†,‡} Gyeongseop Lee,[†] and Jyongsik Jang^{*,†}

[†]School of Chemical and Biological Engineering, College of Engineering, Seoul National University (SNU), 599 Gwanangno, Gwanak-gu, Seoul, 151-742 (Korea)

[‡] Department of Chemistry and Biochemistry, Department of Materials Science and Engineering, and California NanoSystems Institute, University of California, Los Angeles, California 90095-1569, USA

*Corresponding author: Jyongsik Jang, jsjang@plaza.snu.ac.kr, Tel: (+82) 2-880-7069, Fax: (+82) 2-888-7295

Table of Contents

1. SEM image of pure PANI	2
2. CV curve of pristine MoS ₂ nanosheet	3
3. Galvanostatic charge/discharge curve of pristine MoS ₂ nanosheet	4
4. Galvanostatic charge/discharge curves of pristine PANI/MoS ₂ nanocomposite	5
5. Table of current densities, specific capacitances, energy densities, and power densities for PANI/MoS ₂ nanocomposite	6

1. SEM image of pure PANI

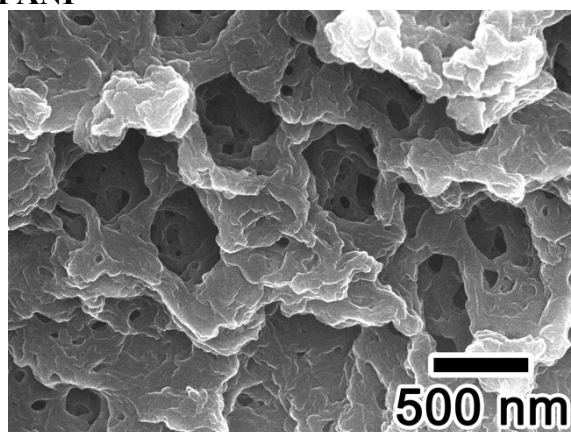


Figure S1. SEM image of pure PANI synthesized by self-stabilized dispersion polymerization method.

2. CV curve of pristine MoS₂ nanosheet

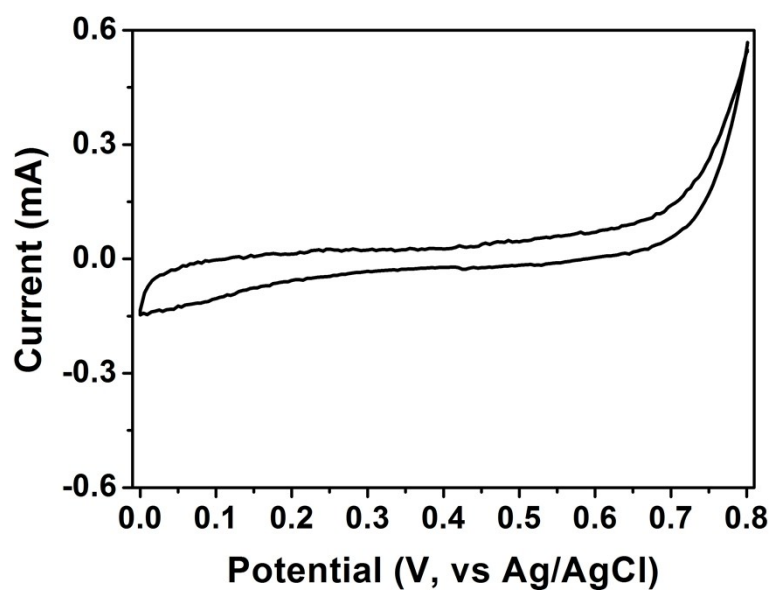


Figure S2. CV curve of pristine MoS₂ nanosheet at a scan rate of 5 mV s⁻¹.

3. Galvanostatic charge/discharge curve of pristine MoS₂ nanosheet

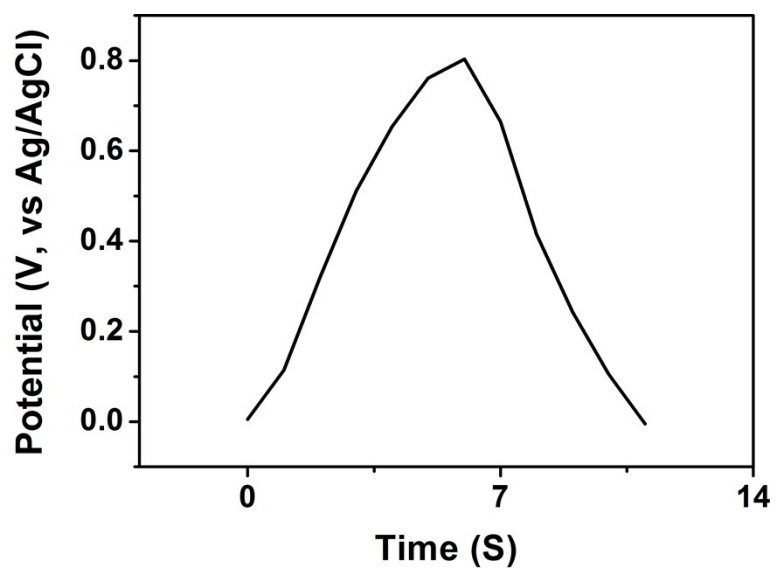


Figure S3. Galvanostatic charge/discharge curve of pristine MoS₂ nanosheet at a current density of 0.6 A g⁻¹.

4. Galvanostatic charge/discharge curves of PANI/MoS₂ nanocomposite

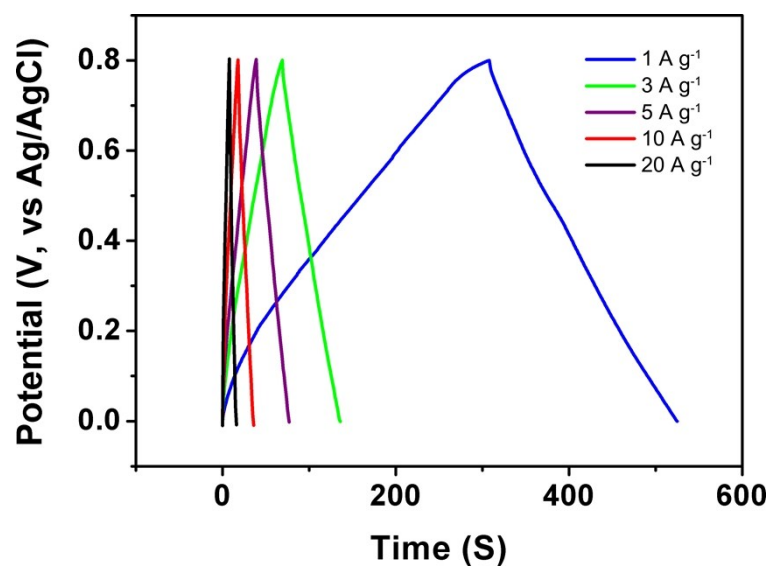


Figure S4. Galvanostatic charge/discharge curves of PANI/MoS₂ nanocomposite at current densities of 1, 3, 5, 10, and 20 A g⁻¹.

5. Table of current densities, specific capacitances, energy densities, and power densities for PANI/MoS₂ nanocomposite

Table S1. Current densities, specific capacitances, energy densities, and power densities for PANI/MoS₂ nanocomposite.

Current density (A g ⁻¹)	Specific capacitance (F g ⁻¹)	Energy density (Wh kg ⁻¹)	Power density (W kg ⁻¹)
1	270	6.0	100
3	246	5.5	300
5	231	5.1	500
10	209	4.7	1000
20	175	3.8	2000