Electronic Supplementary Information

In situ growth of MoS$_2$ nano-sheets on reduced graphene oxide (RGO) surfaces: interfacial enhancement on absorbing performance against electromagnetic pollution

Aming Xie,$^{ab}$ Mengxiao Sun,$^b$ Kun Zhang,$^b$ Wanchun Jiang,$^b$ Fan Wu,$^{ab,*}$
Meng He$^{c,*}$

$^a$ School of Mechanical Engineering, Nanjing University of Science & Technology, Nanjing 210094, P. R. China.

$^b$ State Key Laboratory for Disaster Prevention & Mitigation of Explosion & Impact, PLA University of Science and Technology, Nanjing 210007, P. R. China.

$^c$ CAS Key Laboratory of Nanosystem and Hierarchical Fabrication, National Center for Nanoscience and Technology, Beijing 100190, P. R. China.

Corresponding authors: wufanjlg@163.com (Fan Wu); mhe@nanoctr.cn (Meng He)
**Fig. S1** HRTEM images (a) and the corresponding SAED pattern (b) of MoS$_2$/RGO nano-sheets prepared by 175 mg of GO in the experiment.

**Fig. S2** HRTEM images (a) and the corresponding SAED pattern (b) of as-prepared RGO. GO was fabricated from 5000 mesh of graphite, and RGO was fabricated through chemical reduction.
Fig. S3 RL curves of MoS$_2$/RGO with the filler loading ratio of 5 wt. % (a) and 10 wt. % (b) in wax composites, the test frequency range is from 2 to 18 GHz.

Fig. S4 The best RL curves of composite only loaded pure RGO, the filler loading ratio is 10 wt. %.