Supporting Information

*Aim and Shoot*: Molecule-Imprinting Polymer Coated MoO$_3$ for Selective SERS Detection and Photocatalytic Destruction of Low-Level Organic Contaminants

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**Fig S1.** TEM images of MoO$_3$@MIPs prepared without HNO$_3$ pre-treatment.
**Fig S2.** XPS spectra of MoO$_3$ nanorods before (a) and after treating with HNO$_3$ (b).

**Figure S3.** The standard curve of MB (a); SERS spectra of $10^{-5}$ M MB on MoO$_3$@MIPs substrate, and Raman spectra of $10^{-2}$ M MB on glass slide (b).
**Fig S4.** SERS spectra of $10^{-6}$ M CV on MoO$_3$@MIPs and MoO$_3$@NIPs.

**Fig S5.** SERS spectra of $10^{-5}$ M MB/CV mixture obtained from 10 different sites on the same substrate.

**Fig S6.** TEM micrographs of MoO$_3$@MIPs with different thickness of molecularly imprinted polymers layer.