

Supplementary Material for

**PLLA Nanosheets for Wound Healing: Embedding with Iron-Ion-Containing Nanoparticles**

A. Mussin<sup>1</sup>, A.A. AlJulaih<sup>1</sup>, N. Mintcheva<sup>1,2</sup>, D. Aman<sup>3</sup>, S. Iwamori<sup>1,4</sup>,

S.O. Gurbatov<sup>5</sup>, A. Bhardwaj<sup>6</sup>, S.A. Kulinich<sup>1,4,\*</sup>

<sup>1</sup> Department of Mechanical Engineering, Tokai University, Hiratsuka, Kanagawa 259-1292, Japan

<sup>2</sup> Department of Chemistry, University of Mining and Geology, Sofia 1700, Bulgaria

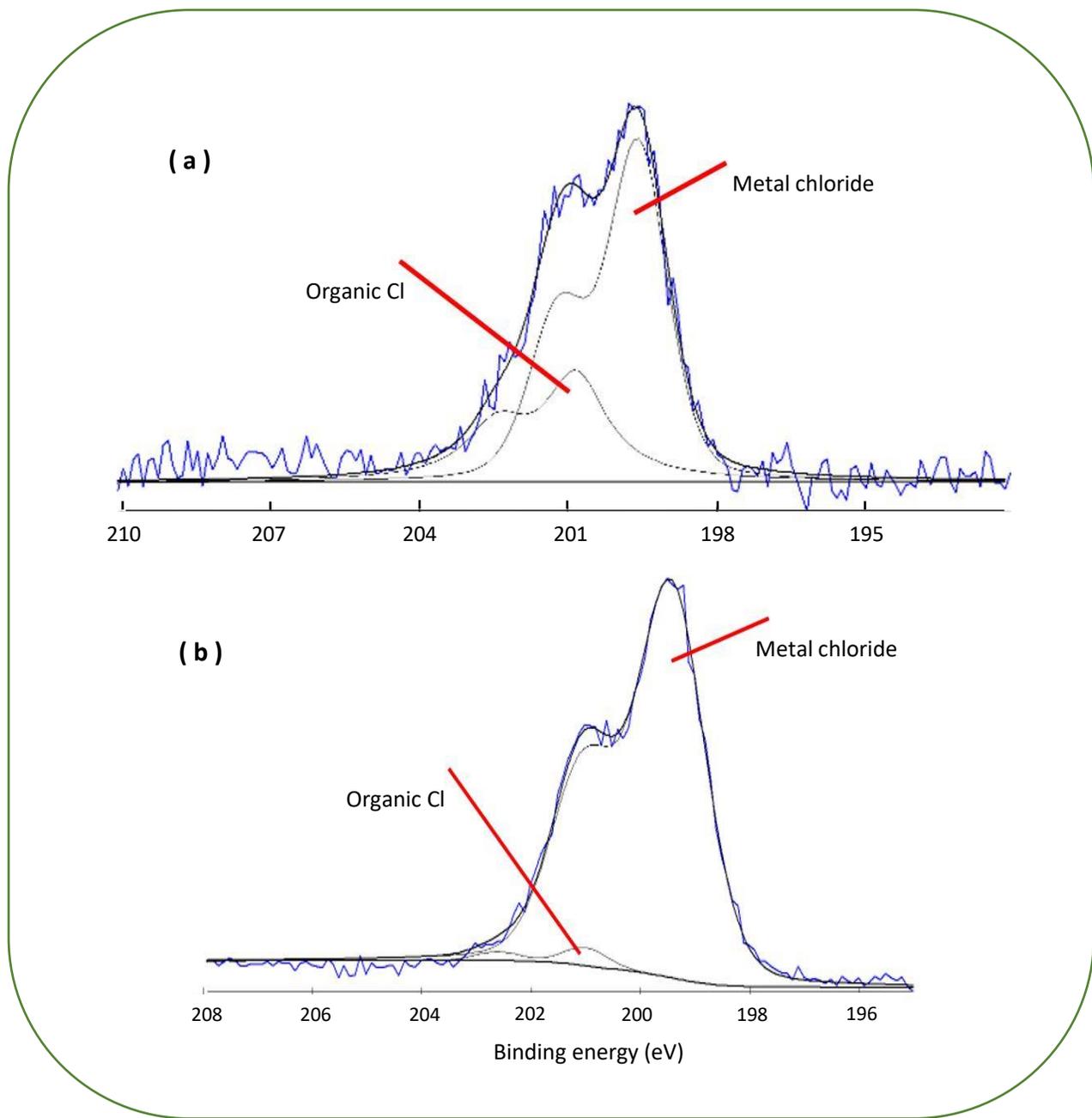
<sup>3</sup> Catalysis Division, Petroleum Refining Department, Egyptian Petroleum Research Institute, Cairo 11727, Egypt

<sup>4</sup> Research Institute of Science and Technology, Tokai University, Hiratsuka, Kanagawa 259-1292, Japan

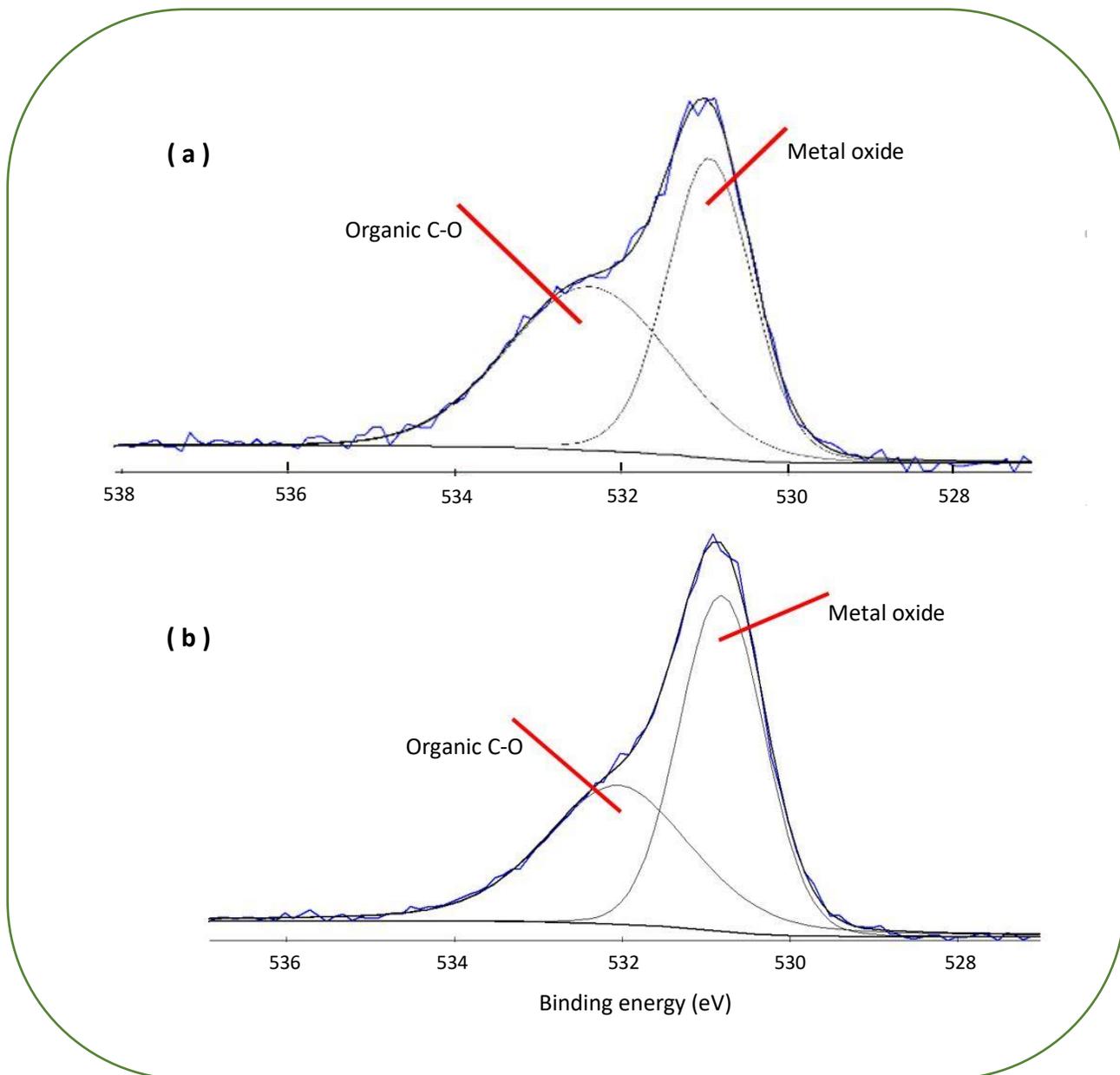
<sup>5</sup> Institute of Automation and Control Processes, Far Eastern Branch, Russian Academy of Science, Vladivostok 690041, Russia

<sup>6</sup> Department of Environmental Science, Amity University, Gwalior, Madhya Pradesh 474005, India

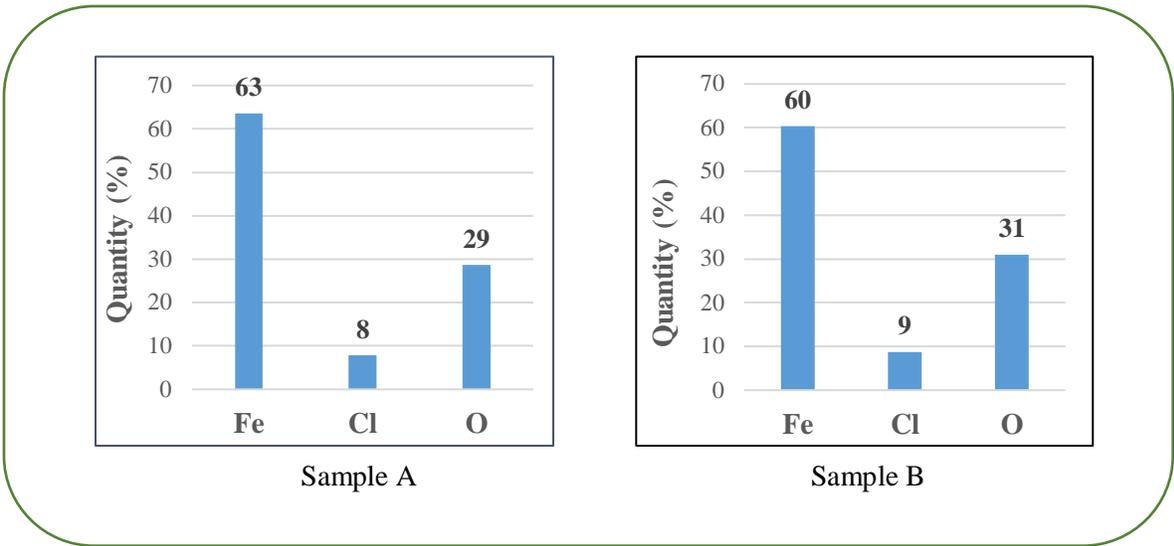
\* Correspondence: skulinich@tokai-u.jp (S.A.K.)



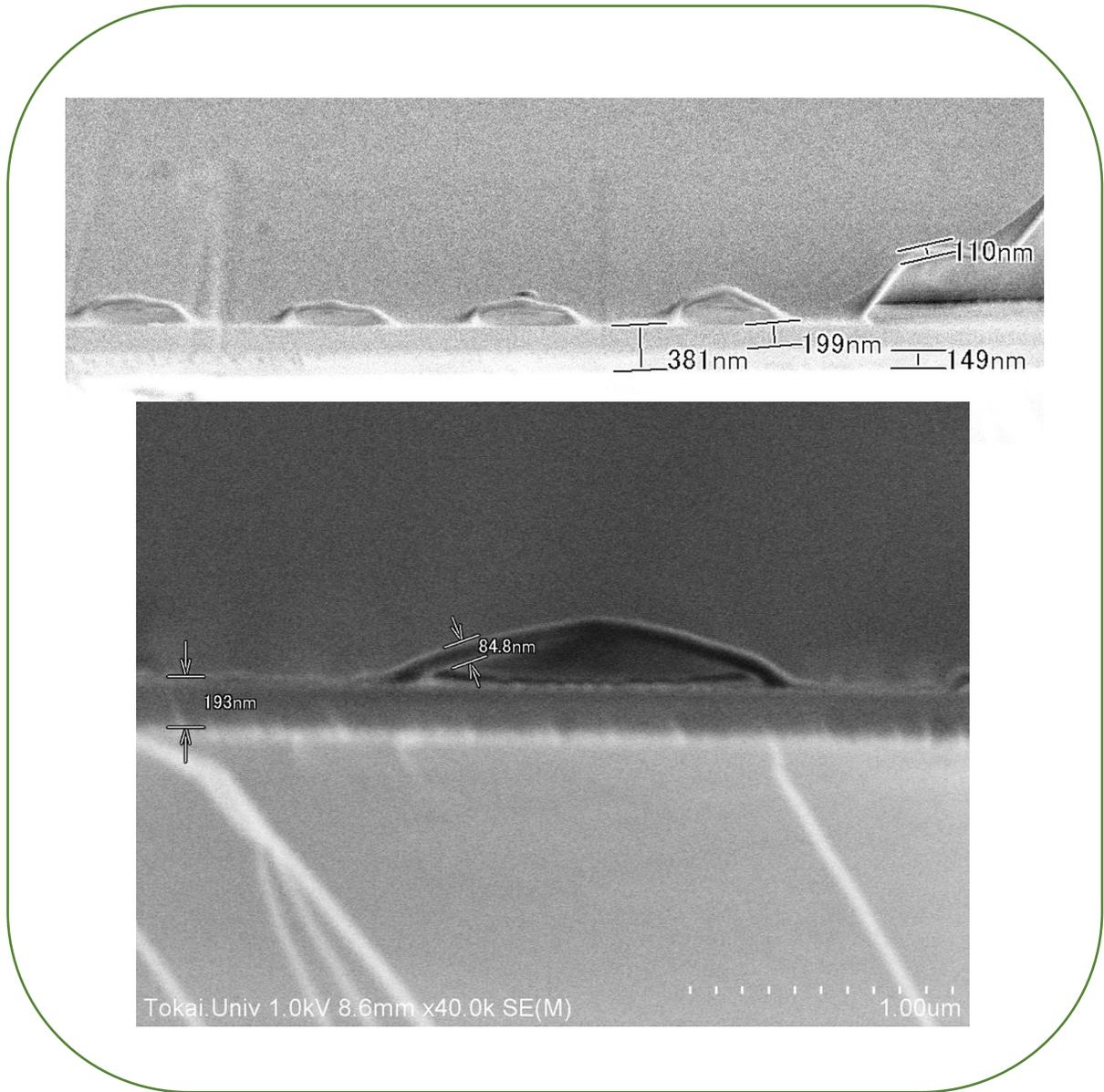
**Figure S1.** XPS Cl 2p spectra of Fe-containing NPs in Samples A (a) and B (b).



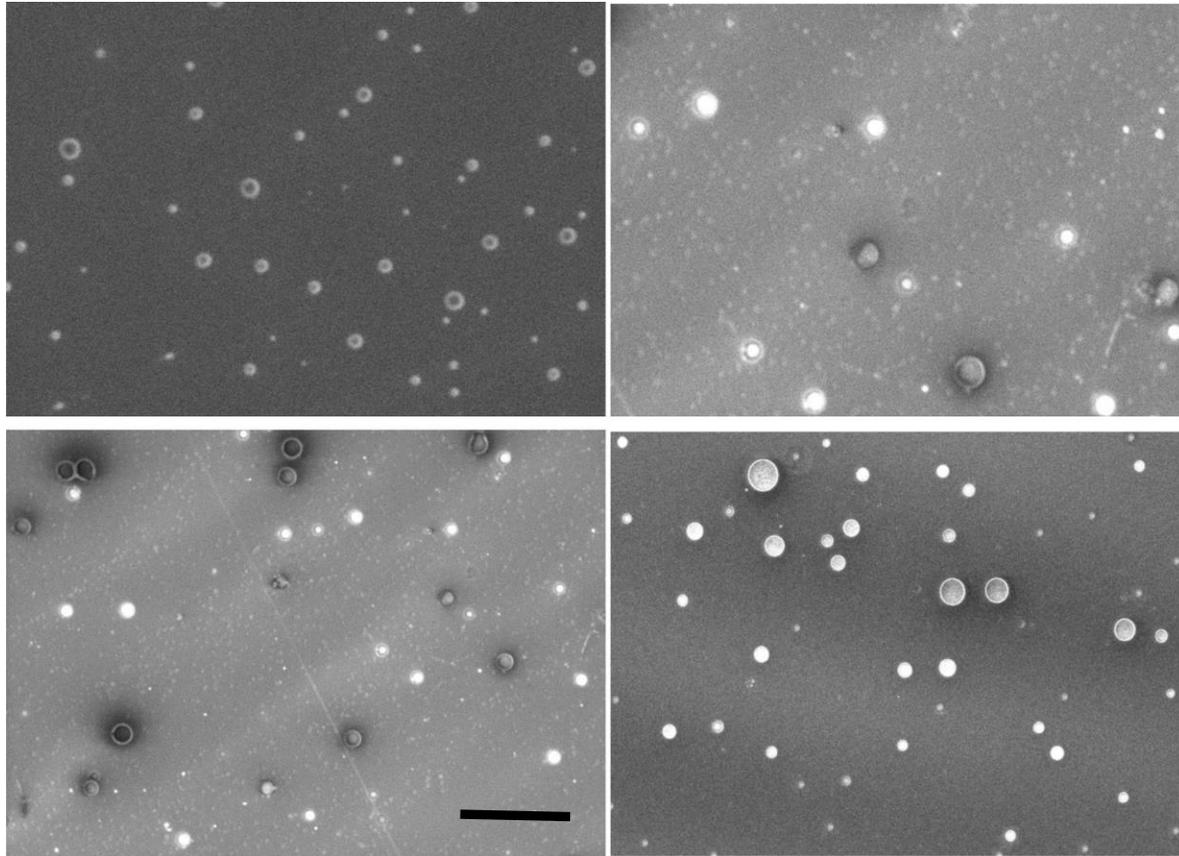
**Figure S2.** XPS O 1s spectra of Fe-containing NPs in Samples A (a) and B (b).



**Figure S3.** Elemental composition of Samples A and B prepared by LAL (as calculated based on XPS results).



**Figure S4.** Cross-sectional SEM images of PLLA NSs incorporated with NSs. The nanosheets were spin-coated on Si substrate and have ~190-nm-thick PVA under-layer.



**Figure S5.** Surface images (SEM micrographs) of PLLA NSs loaded with Fe-containing and with ZnO NPs. Scale bar indicates 1  $\mu\text{m}$ .