membranes

MDPI

*Supplementary information*

# Kinetic and Isotherm Study of As(III) Removal From Aqueous Solution By PET Track-Etched Membranes Loaded with Copper Microtubes

**Alyona V. Russakova [1], Liliya Sh. Altynbaeva [2,3], Murat Barsbay [4], Dmitriy A. Zheltov [2], Maxim V. Zdorovets [2,5,6] and Anastassiya A. Mashentseva [2,3,*]**

1 The School of Information Technologies and Intelligent Systems, D.Serikbayev East Kazakhstan State Technical University, 070004 Ust-Kamenogorsk, Kazakhstan; Arussakova@gmail.com
2 The Institute of Nuclear Physics of the Republic of Kazakhstan, 050032 Almaty, Kazakhstan; lilija310378@gmail.com (L.S.A.); zheltovda@gmail.com (D.A.Z.); mzdorovets@gmail.com (M.V.Z.)
3 Department of Chemistry, L.N. Gumilyov Eurasian National University, 010008 Nur-Sultan, Kazakhstan
4 Department of Chemistry, Hacettepe University, 06800 Ankara, Turkey; mbarsbay@hacettepe.edu.tr
5 Department of Intelligent Information Technologies, The Ural Federal University, 620002 Yekaterinburg, Russia
6 Engineering Profile Laboratory, L.N. Gumilyov Eurasian National University, 010008 Nur-Sultan, Kazakhstan
* Correspondence: a.mashentseva@inp.kz; Tel.: +7-707-322-4399

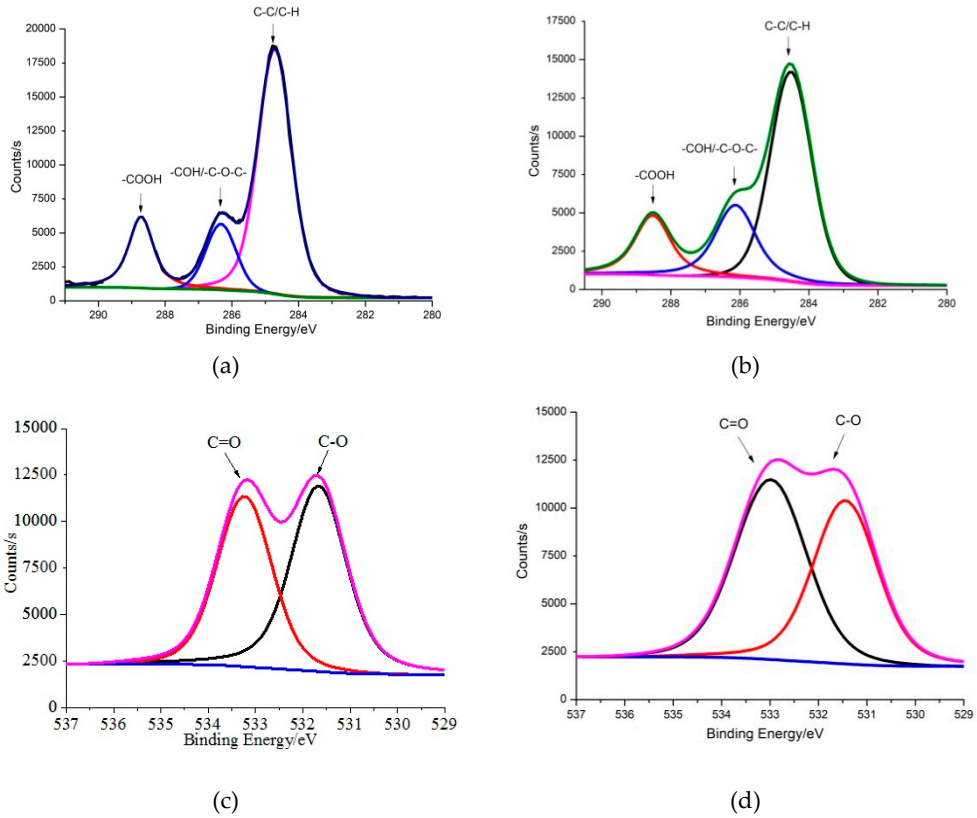


**Figure S1.** XPS high resolution C1s spectra of the "etched-only" (**a**) and oxidized (**b**) polyethylene terephthalate (PET) template (b), O1s spectra of the "etched-only" (**c**) and oxidized (**d**) PET template.

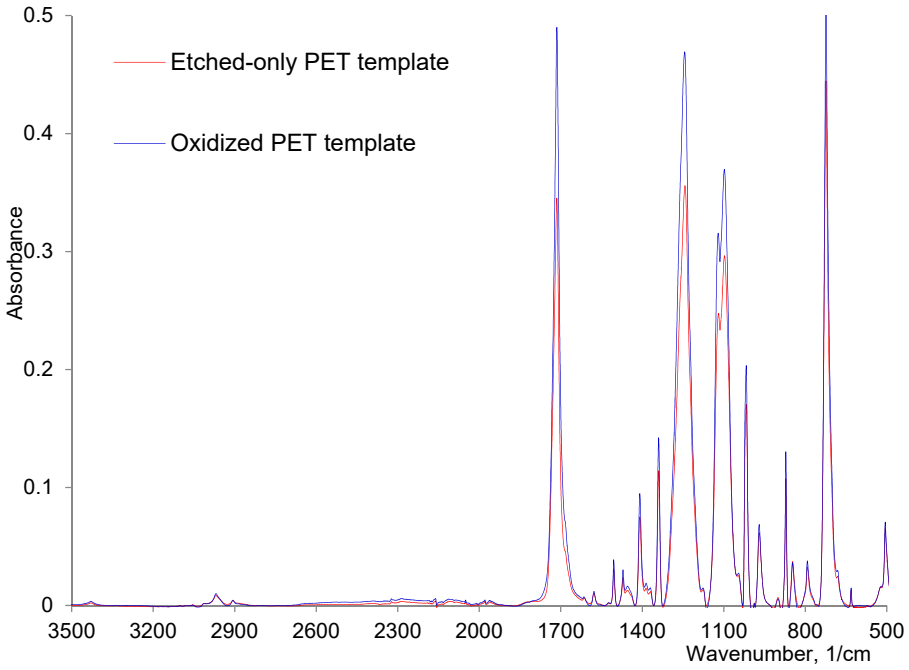


**Figure S2.** Fourier-transform infrared spectroscopy (FTIR) spectra of "etched-only" and oxidized PET templates.

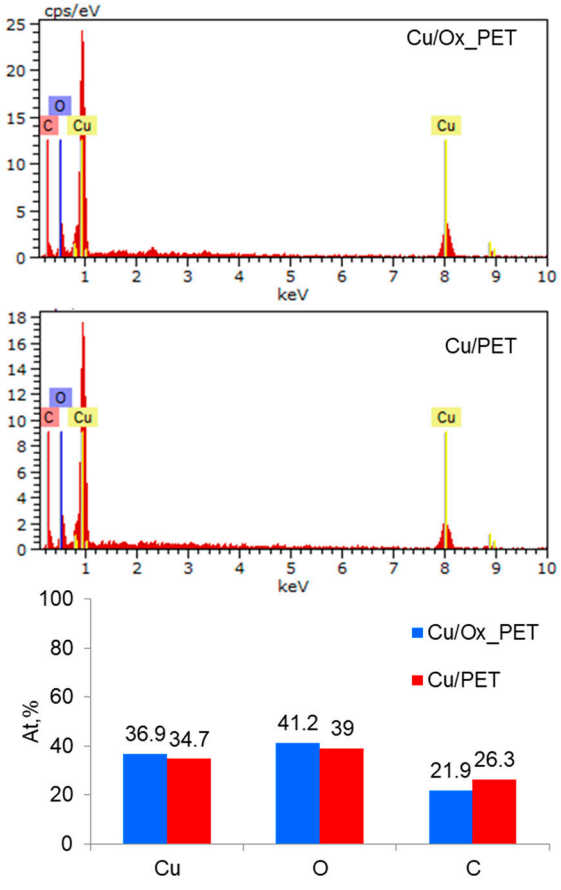


**Figure S3.** An Energy-dispersive X-ray spectroscopy (EDX) spectra with percentage of elements (at.%) for a Cu/PET and Cu/Ox_PET composite track-etched membrane.