Supporting information

Preparation of rGO and Iron Oxide Nanoparticles Incorporated Polyvinyl Acetate based Membrane for the removal of Pb^{2+} from Anti-corrosive paint Industrial wastewater

Muhammad Yaseen[1*], Waqas Ahmad[1], Maria[1], Muhammad Usman Farooq[2], Muhammad Shakir[3], Abdul Naeem[4]

[1]*Institute of Chemical Sciences, University of Peshawar, 25120, KP, Pakistan.*

[2]*Department of Chemical Engineering, Ghulam Ishaq Khan Institute of Engineering Sciences & Technology, Topi, Swabi, KP, Pakistan.*

[3]*Institute of Space Technology, Islamabad, 44000, Pakistan*

[4]*National Center of Excellence in Physical Chemistry, University of Peshawar, KP, Pakistan.*

Corresponding author: **Muhammad Yaseen**

Email: myyousafzai@gmail.com, myyousafzai@uop.edu.pk

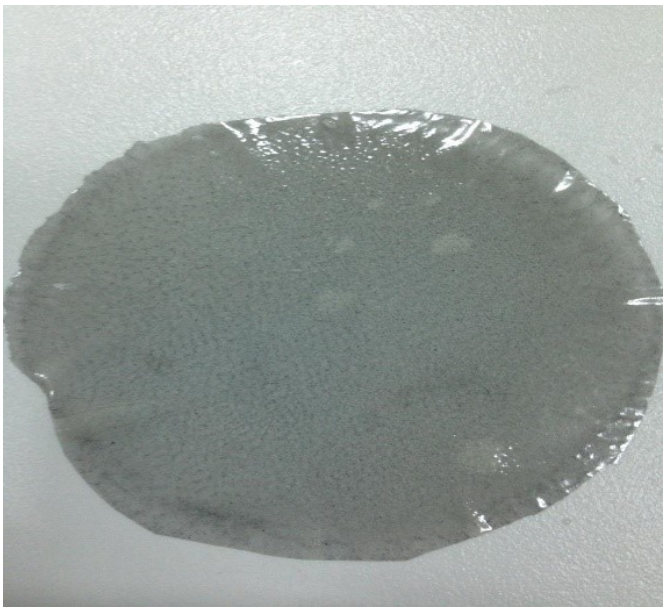

Figure S1: Image of the synthesized hybrid membrane

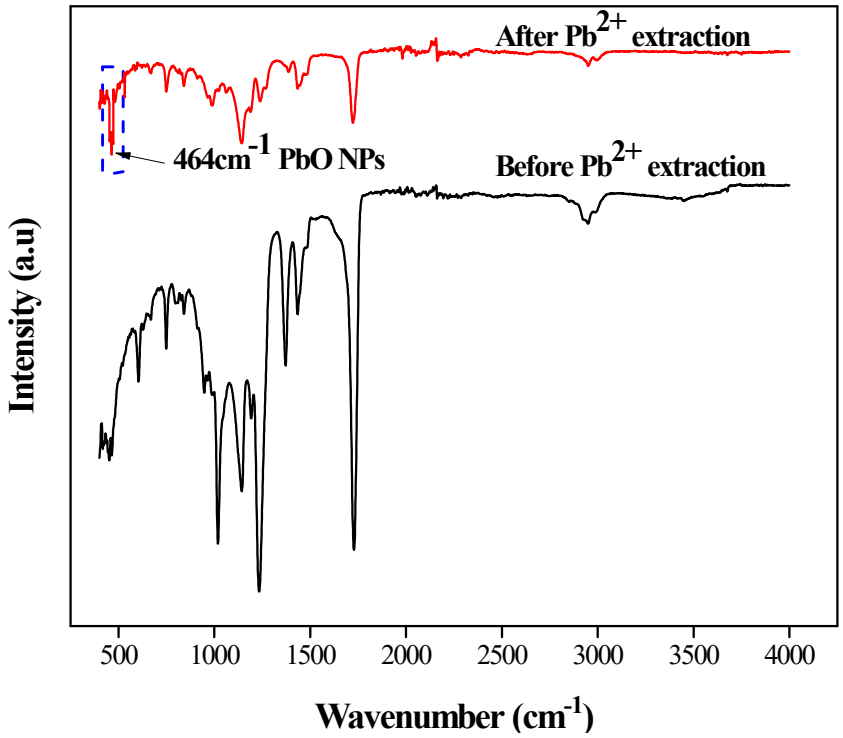

Figure S2: FTIR analysis of PVAc/rGO/Fe_2O_3 membrane before and after extraction of Pb^{2+} from anticorrosive paint wastewater.

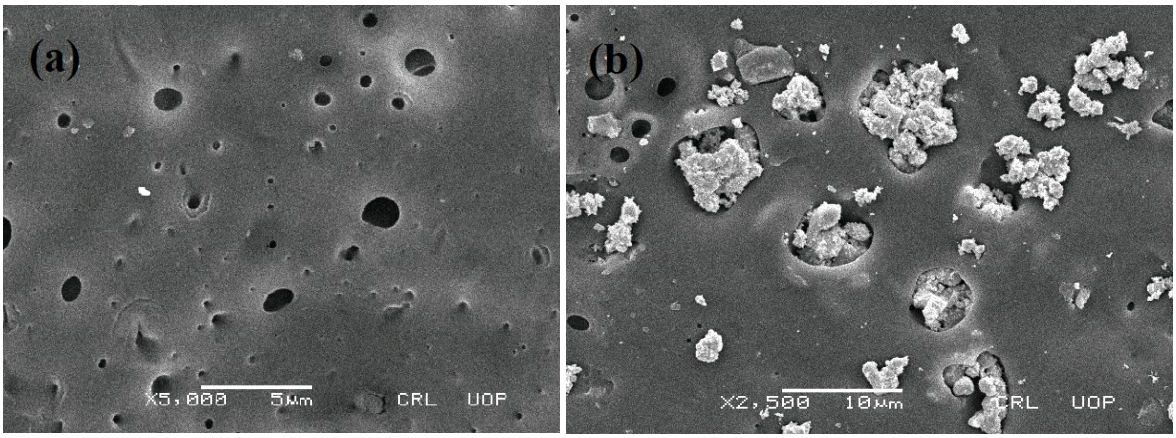

Figure S3: SEM image of PVAc/rGO/Fe_2O_3 membrane **(a)** fresh and **(b)** spent.

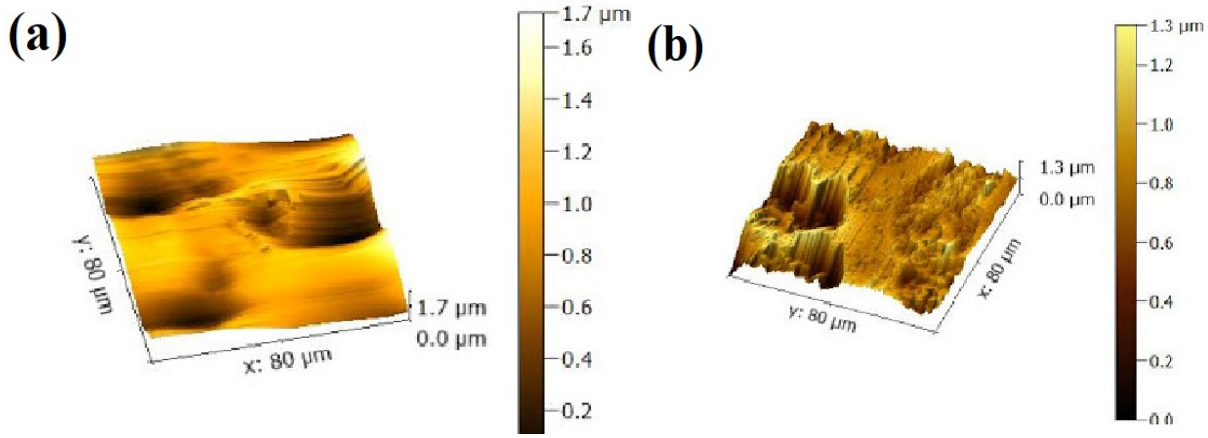

Figure S4: AFM 3D image of the PVAc/rGO/Fe_2O_3 membrane **(a)** fresh and **(b)** spent.

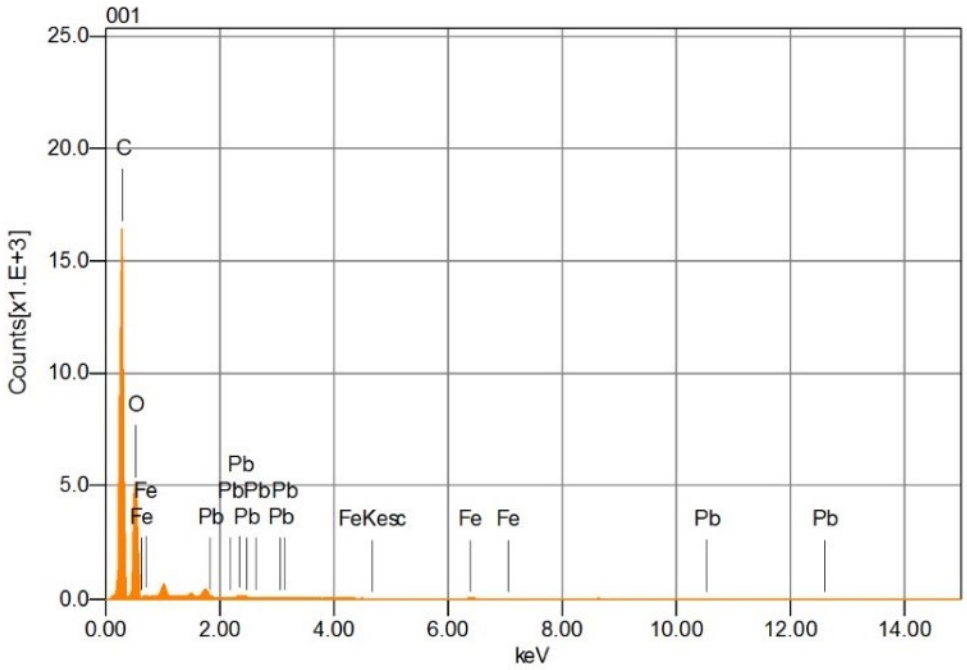

Figure S5: EDX analysis of spent PVAc/rGO/Fe_2O_3 membrane.

Table S1. EDX analysis of the post-Pb^{2+} removal PVAc/rGO/Fe_2O_3 membrane from anti-corrosive paint industrial wastewater.

Membrane	Element	Mass (%)	Atom (%)	Total
PVAc/rGO/Fe_2O_3	C	52.00	55.60	100
	O	47.25	44.24	
	Fe	0.14	0.04	
	Pb	0.61	0.12	