Electronic Supplementary Information

Highly Efficient Mica-Incorporated Graphene Oxide-based Membranes for Water Purification and Desalination

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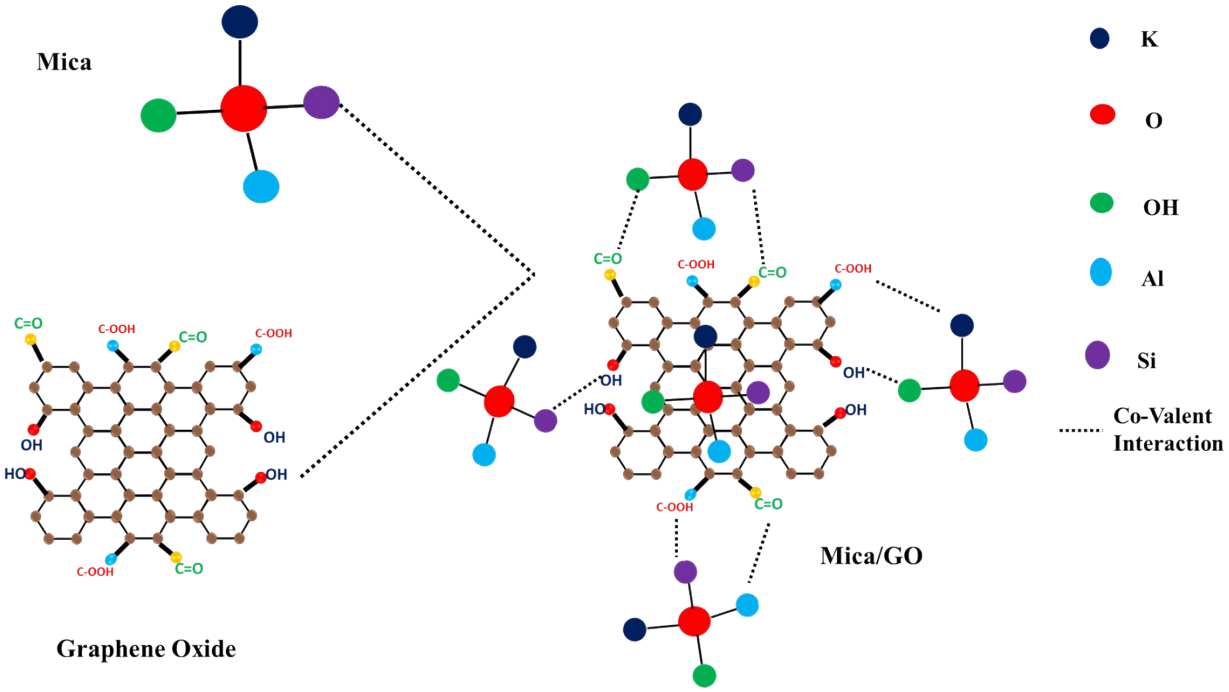

Fig S1. Proposed mechanism of mica with graphene oxide nanosheets.

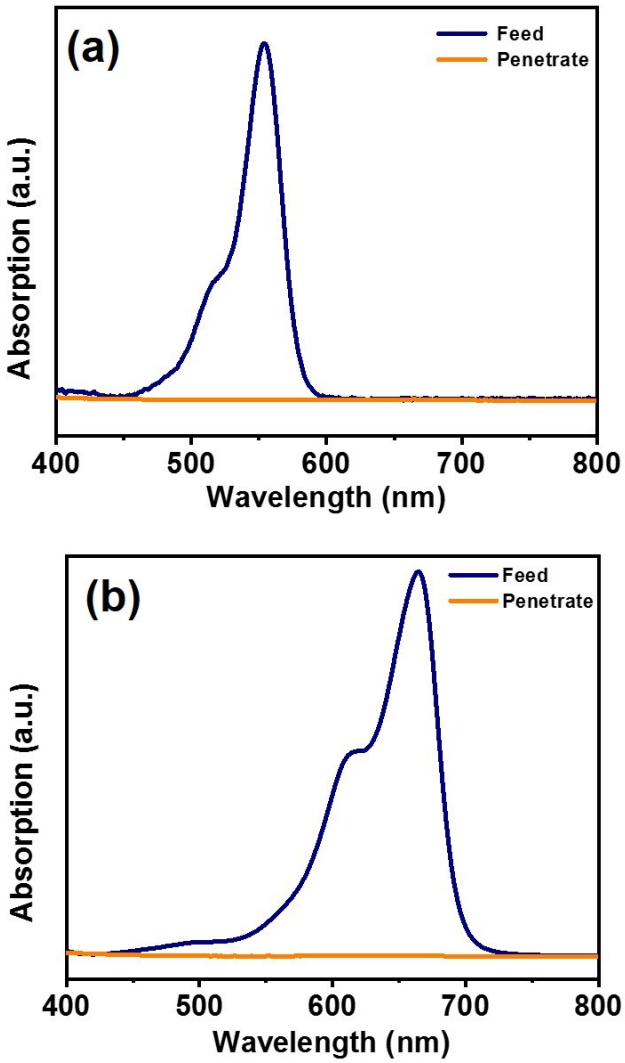

Fig. S2. (a,b) Ultraviolet-visible absorption spectra of the feed, and permeate of (a) RB, and (b) MLB solution after filtration by MGO composite membrane.

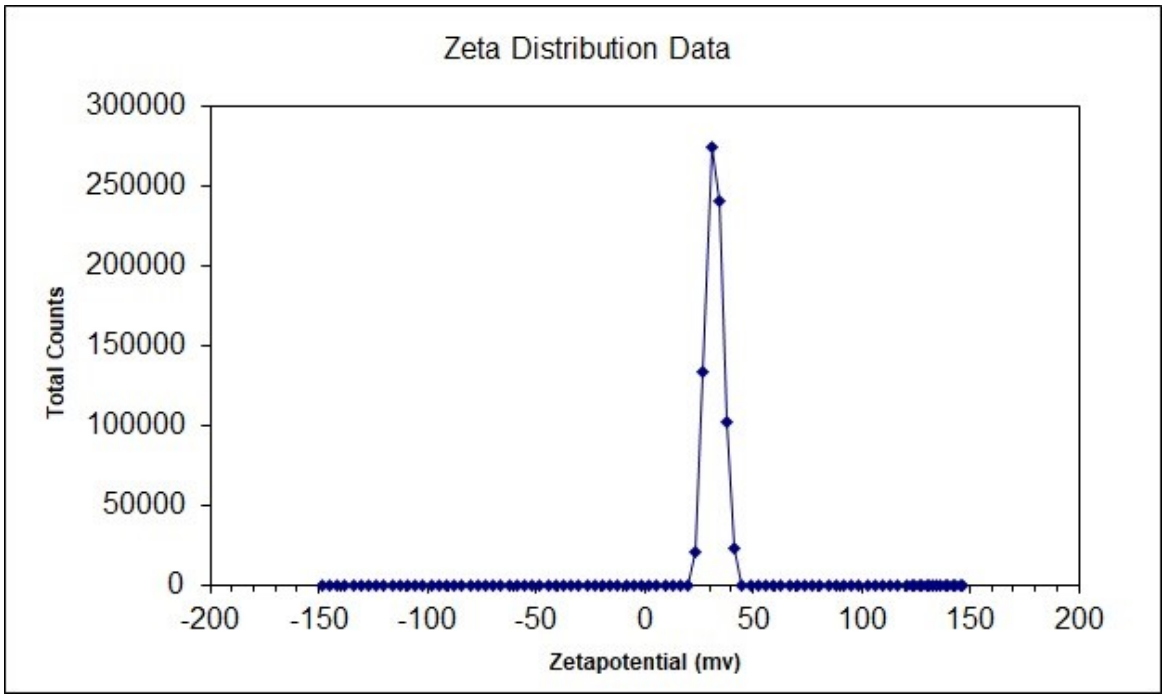

Fig. S3 Zeta potential graph of MGO membranes

Table S1. The equilibrium weight swelling ratio (ESR) of GO, MGO (50 wt.%) membranes in water.

Type of membrane	ESR
GO	2.5 ± 0.1
MGO	1.2 ± 0.1

Table S2. Permeance of GO and MGO Membranes by Varying Different Thicknesses in DI Water at Room Temperature

Thickness (nm)	Pristine GO membrane Permeance (L m^{-2} h^{-1} bar^{-1})	Thickness (nm)	MGO membrane Permeance (L m^{-2} h^{-1} bar^{-1})
290 ± 10	85 ± 5	260 ± 10	870 ± 5
620 ± 10	46 ± 4	530 ± 10	665 ± 5
940 ± 10	30 ± 2	790 ± 10	540 ± 5
1460 ± 10	10 ± 2	1350 ± 10	355 ± 5