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MDPI

Supplementary Materials

Sustainable Development of Enhanced Luminescence Polymer-Carbon Dots Composite Film for Rapid Cd^{2+} Removal from Wastewater

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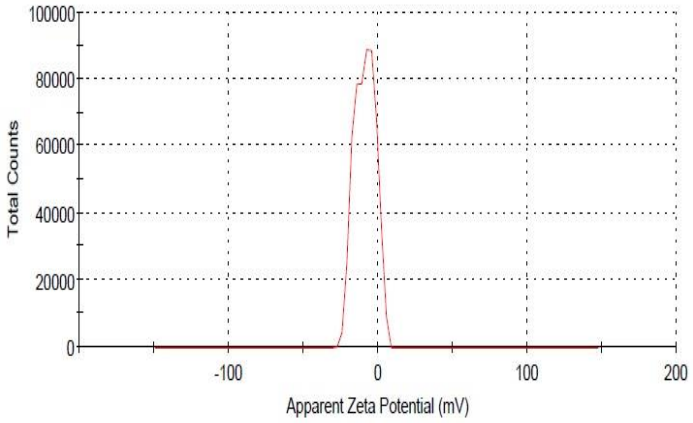

Figure S1. Zeta potential of CDs.

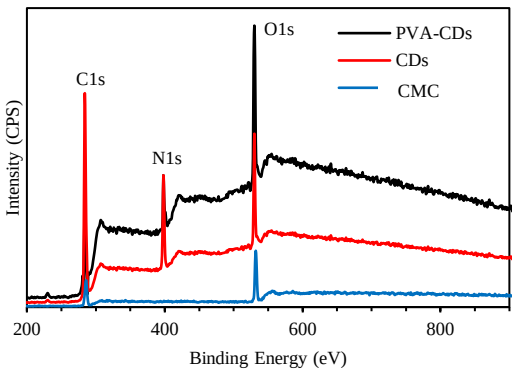

Figure S2. XPS spectrum of CMC, CDs and PVA-CDs.

Table S1. Elemental compositions of the EFB, CDs and PVA-CDs samples by XPS analysis.

Sample	C (%)	O (%)	N (%)	Na (%)
EFB	39.6	59.4	-	0.82
CDs	66.5	12.3	21.4	-
PVA-CDs	24.2	64.3	11.2	0.24

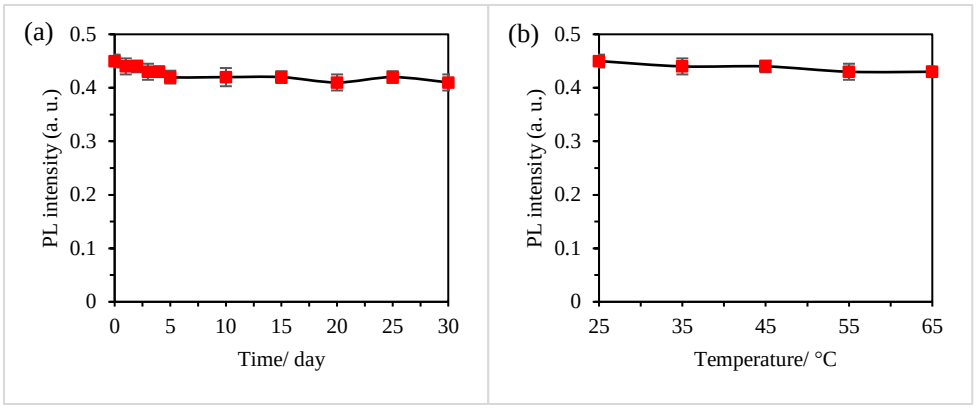

Figure S3. Photostability of PVA-CDs composite film at different aging times (**a**) and at different heating temperatures (**b**).

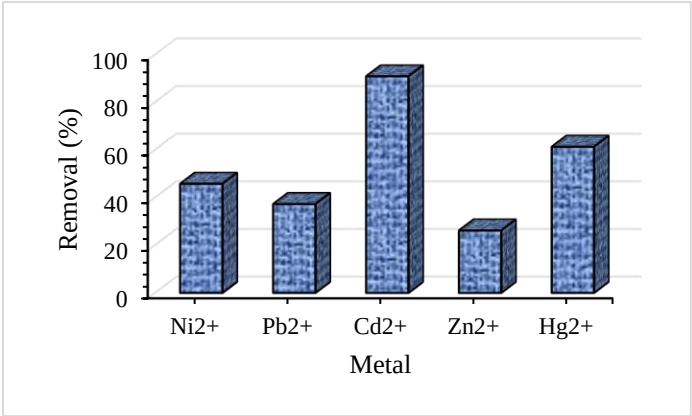

Figure S4. Selectivity removal of Ni(II), Pb(II), Cd(II), Zn(II) and Hg(II) by using PVA-CDs composite film.

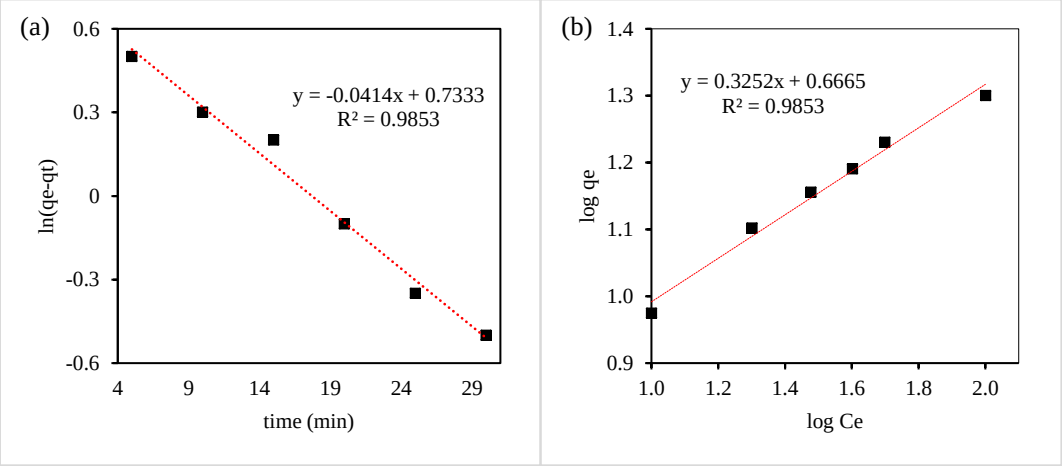

Figure S5. Pseudo-first-order model (a) and Freundlich isotherm (b) for removal of Cd^{2+} onto PVA-CDs.

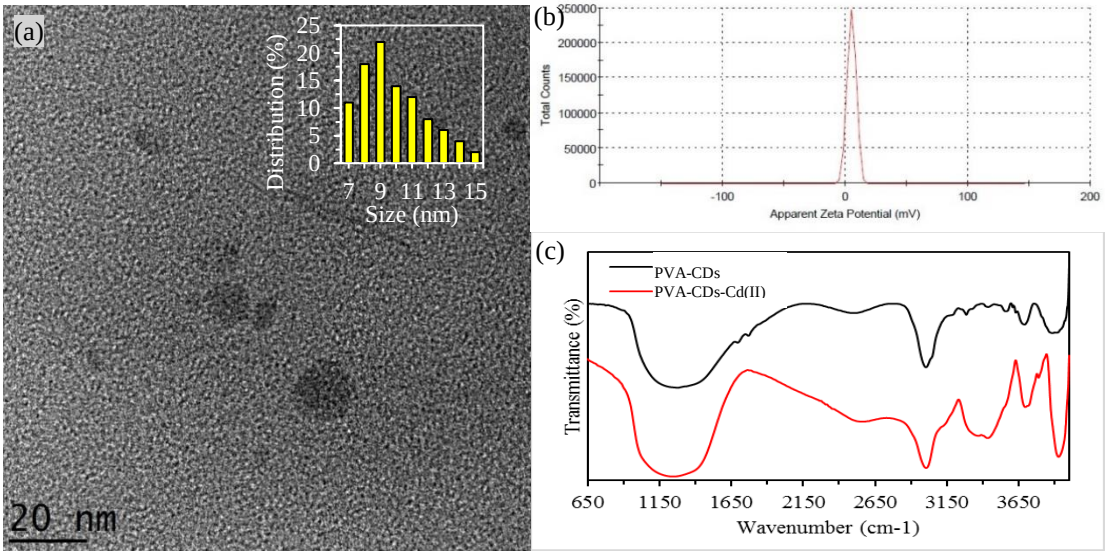

Figure S6. (**a**) TEM image, (**b**) Zeta potential and (**c**) FTIR of PVA-CDs film in the presence of Cd2+. Inset: size distribution.