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## **Supplemental Figures and Tables**

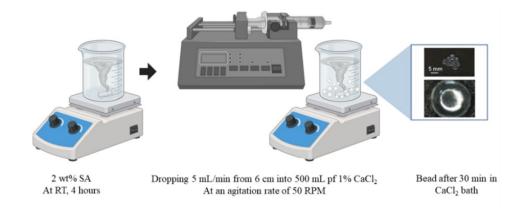


Figure S1. Schematic diagram showing the formation of NaA beads.

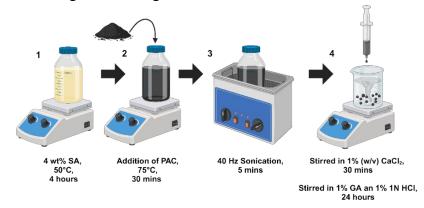


Figure S2. Sequence of steps in the preparation of PAC-Alginate Hydrogel beads

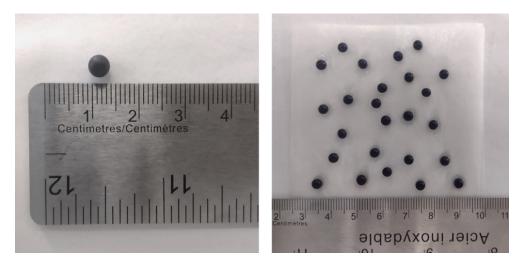


Figure S3. Images of PAC-NaA hydrogel beads.

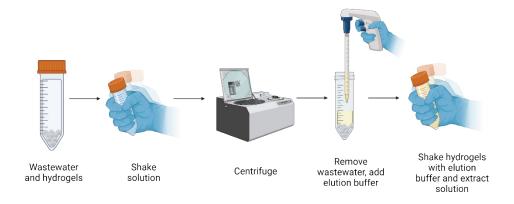


Figure S4. Schematic diagram of PAC-NaA hydrogel virus concentration procedure.

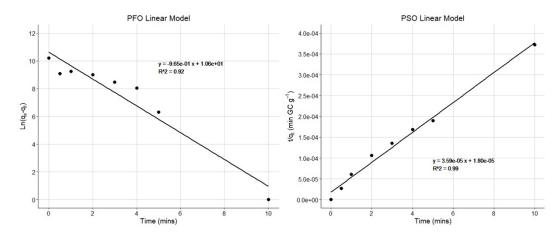


Figure S5. LPFO and LPSO kinetic models.

**Table S1.** Annual average physiochemical parameters of raw wastewater from Plant A and B. Total suspended solids (TSS), total biological oxygen demand (BOD), temperature, pH and daily average flow.

Location	TSS (mg/L)	BOD (mg/L)	Temperature (°C)	pН	Daily Flow (m <sup>3</sup> /day)
Plant A	214	133	10.2	7.2	32941
Plant B	148	79.3	11.6	7.0	10794