**SUPPORTING INFORMATION**

**Figure 1S.** The TGA data from as-prepared BHAP (a), CA/BHAP (b), and 3,4-DHBA/BHAP (c) powders obtained in the temperature range 25–1000 °C at a heating rate of 10 °C/ min, in the dynamic air atmosphere (flow rate 20 cm3/min)



**Table S1.** Zeta potential of as-prepared BHAP, CA/BHAP, and 3,4-DHBA/BHAP powders dispersed in the inert electrolyte (10-2 mol/L KNO3, solid-to-solution ratio 1/200).

|  |  |  |
| --- | --- | --- |
| Sample | Equilibrium pH | Zeta potential (meV) |
| BHAP | 7.5±0.1 | -10.3 ± 0.6 |
| CA/BHAP | 7.2±0.1 | -10.5 ± 1.4 |
| 3,4-DHBA/BHAP | 7.3±0.1 | -12.3 ± 1.0 |

**Figure S2.** Linear fits of Pb equilibrium sorption from five-component equimolar mixtures by BHAP, CA/BHAP, and 3,4-DHBA/BHAP using Langmuir (A) and Freundlich (B) isotherm models



