**Supporting information**

**Table A.** Electrophoretic mobilities of 10−8M Pu(VI) in carbonate/NaClO4 media at *I* = 0.202 m and T = 25 ± 1 °C.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **pH** | **[CO32−] (mol/L)** | ***µ*ep (cm².V−1.s−1)** | **pH** | **[CO32−] (mol/L)** | ***µ*ep (cm².V−1.s−1)** |
| 9.23 | 2.54 10–2 | −1.52 10–4 | 6.33 | 2.71 10–5 | −7.31 10–5 |
| 9.08 | 1.94 10–2 | −1.51 10–4 | 6.04 | 1.03 10–5 | −5.00 10–5 |
| 8.52 | 6.19 10–3 | −1.40 10–4 | 5.99 | 8.82 10–6 | −4.09 10–5 |
| 8.05 | 2.16 10–3 | −1.23 10–4 | 5.73 | 3.35 10–6 | −2.62 10–5 |
| 7.45 | 5.41 10–4 | −1.03 10–4 | 4.50 | 1.66 10–8 | 1.06 10–4 |
| 7.11 | 2.34 10–4 | −9.45 10–5 | 3.39 | 1.01 10−10 | 2.22 10−4 |