Supporting Information

Synthesis of Cationic Polymer Dots for Perrhenate Anion Detection in Aqueous Solutions

Hyeran Gim and Byunghwan Lee†

Department of Chemical Engineering, Keimyung University, 1095 Dalgubeoldaero, Dalseo-gu, Daegu 42601, Korea

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†Corresponding Author: Byunghwan Lee
E-mail: leeb@kmu.ac.kr
ORCID ID: 0000-0001-7523-829X
Tel: (+) 82-053-580-5239
Address: Department of Chemical Engineering, Keimyung University, 1095 Dalgubeoldaero, Dalseo-gu, Daegu 42601, Korea

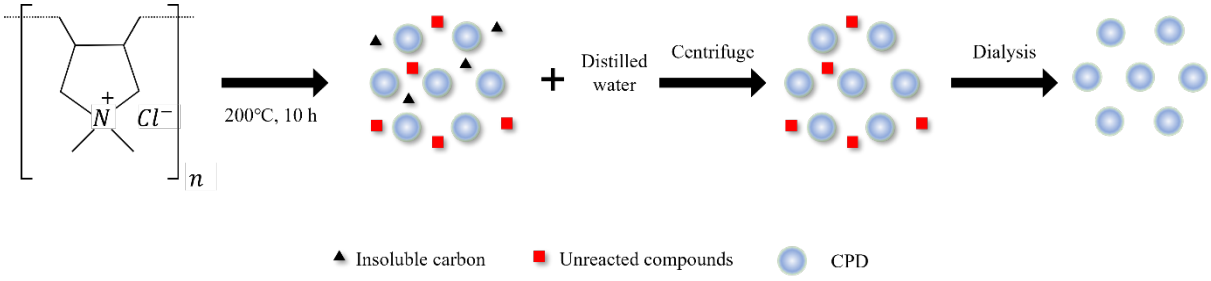

Figure S1. Synthetic procedure of the cationic polymer dots (CPDs).

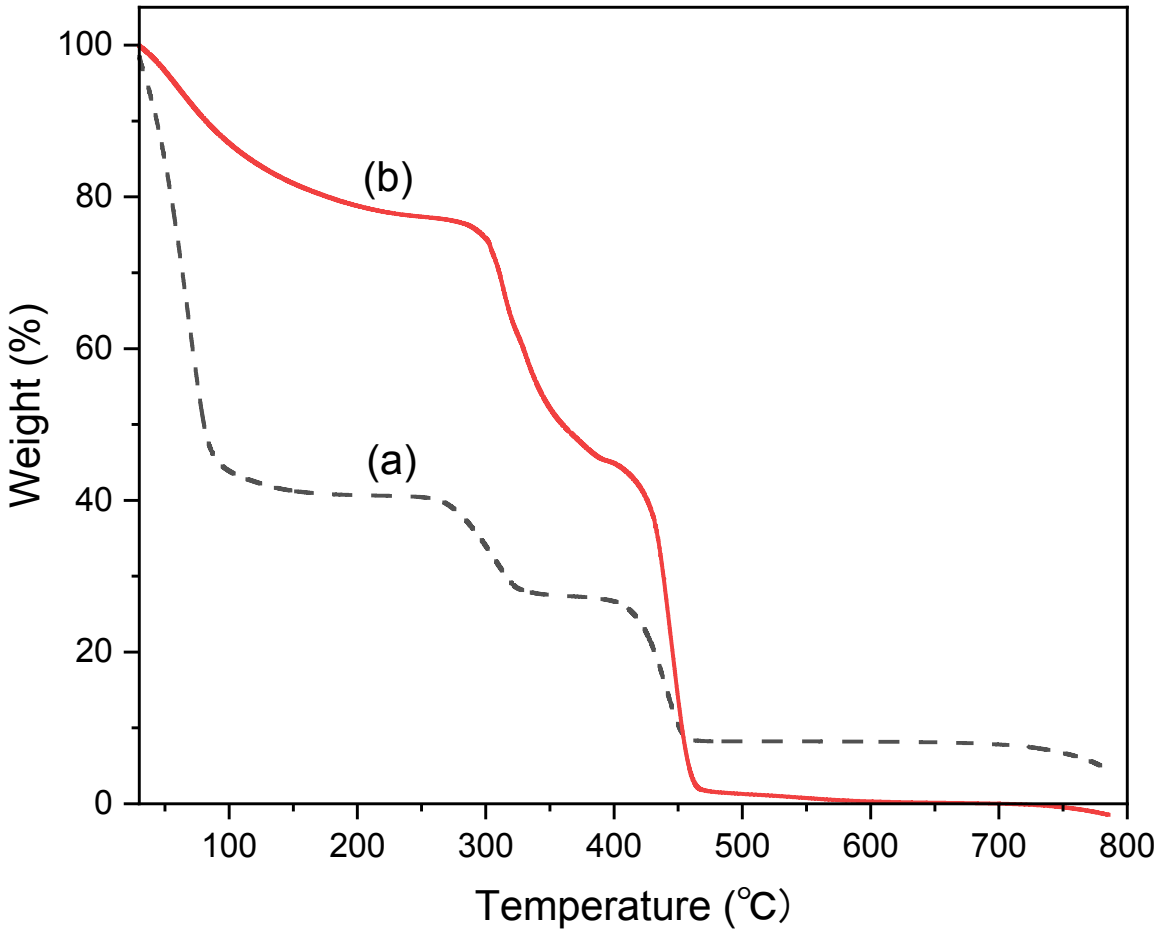

Figure S2. Thermogravimetric analysis curves of (a) polydiallyl dimethyl ammonium chloride (polyDDA) and (b) cationic polymer dots (CPDs).

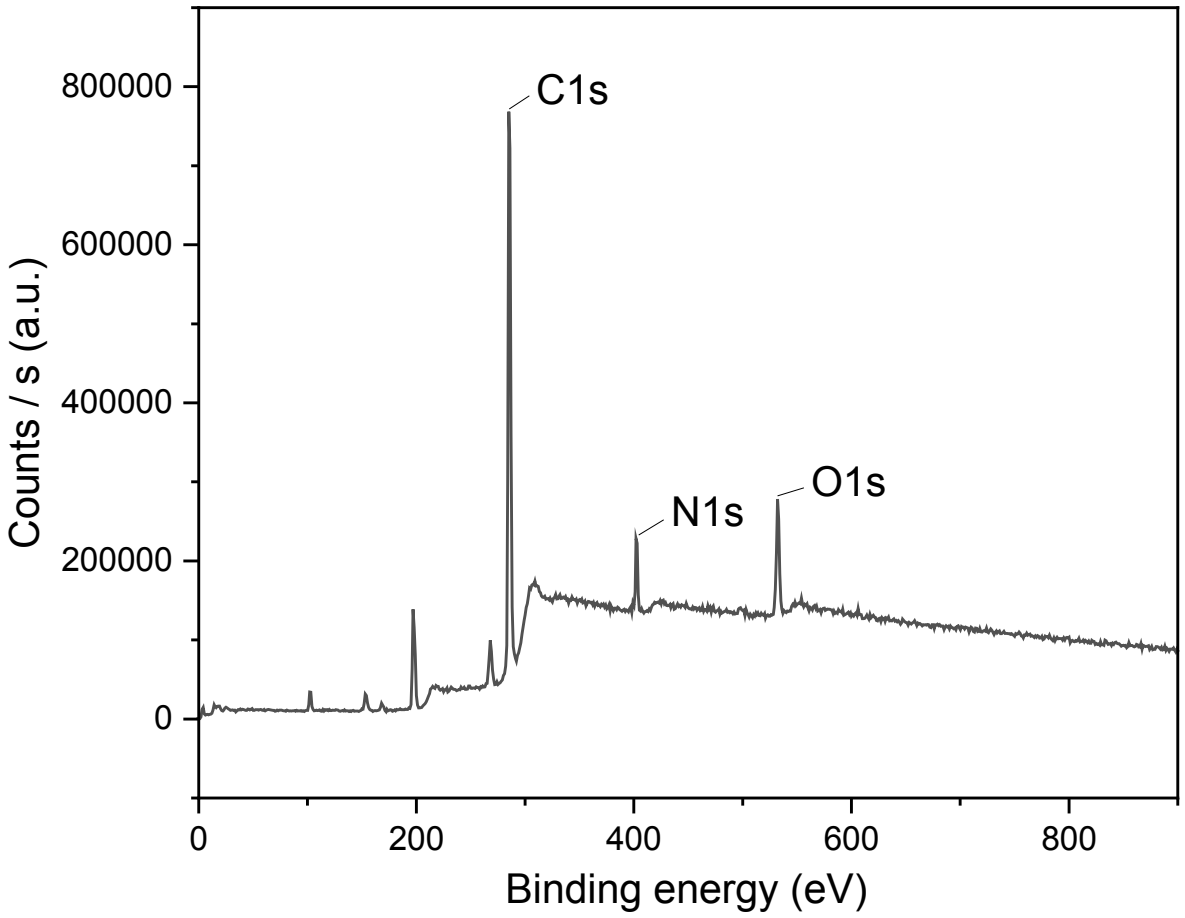

Figure S3. X-ray photoelectron spectroscopy (XPS) survey spectrum of the prepared cationic polymer dots (CPDs).

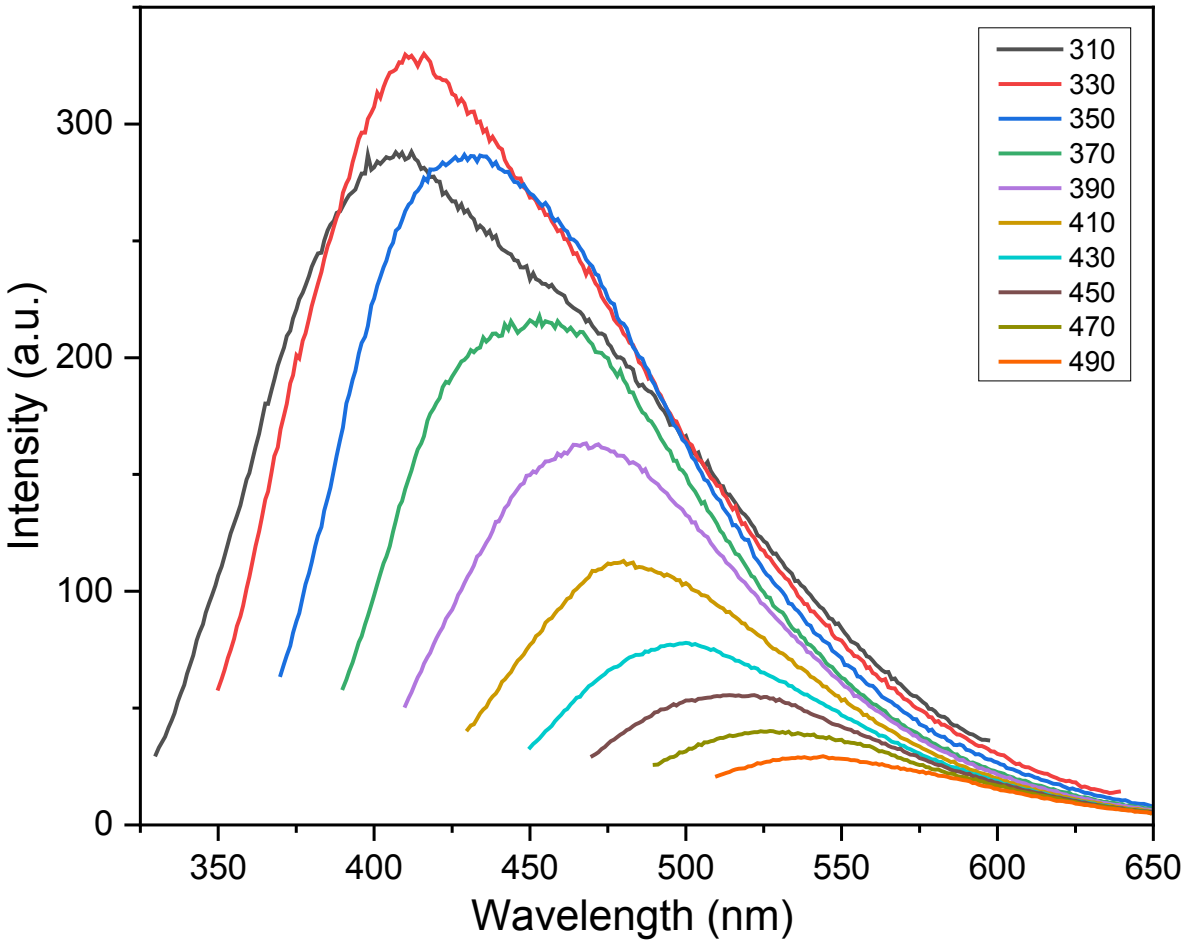

Figure S4. Fluorescence emission wavelength changes of the cationic polymer dots (CPDs) according to the excitation wavelength change.

Table S1. Comparison of the performance of the cationic polymer dot (CPD) with that of other sensors for detecting perrhenate anion

Fluorescence sensor	Linear ranges (mM)	Detection limit (μM)	Reference
1-Pyrenemethylamine	0.2~20	14	6
Auramine O	30~100	270	30
Thioflavin-T	10~50	260	31
Cationic dual-emission carbon dot (C-CD)	~1	87 and 208	33
Cationic polymer dot (CPD)	~2.5	0.0102	This work