

Supporting Information

Tuning Particle Size of Prussian Blue by a Dual Anion Sources Method

*Hao Wang^{ab}, Qiang Zhu^c, Haitao Li^{ad}, Changsheng Xie^a and Dawen Zeng^{*ab}*

- a. The State Key Laboratory of Materials and Processing Die & Mould Technology,
Department of Materials Science and Engineering, Huazhong University of Science and
Technology, Wuhan 430074, People's Republic of China
- b. Hubei Collaborative Innovation Center for Advanced Organic Chemical Materials, Hubei
University, Wuhan 430074, People's Republic of China
- c. Department of Electronic Engineering, The Chinese University of Hong Kong, New
Territories, Hong Kong
- d. Hubei Institute of Aerospace Chemotechnology, No. 58, Qinghe Road, Xiangyang 441003,
People's Republic of China.

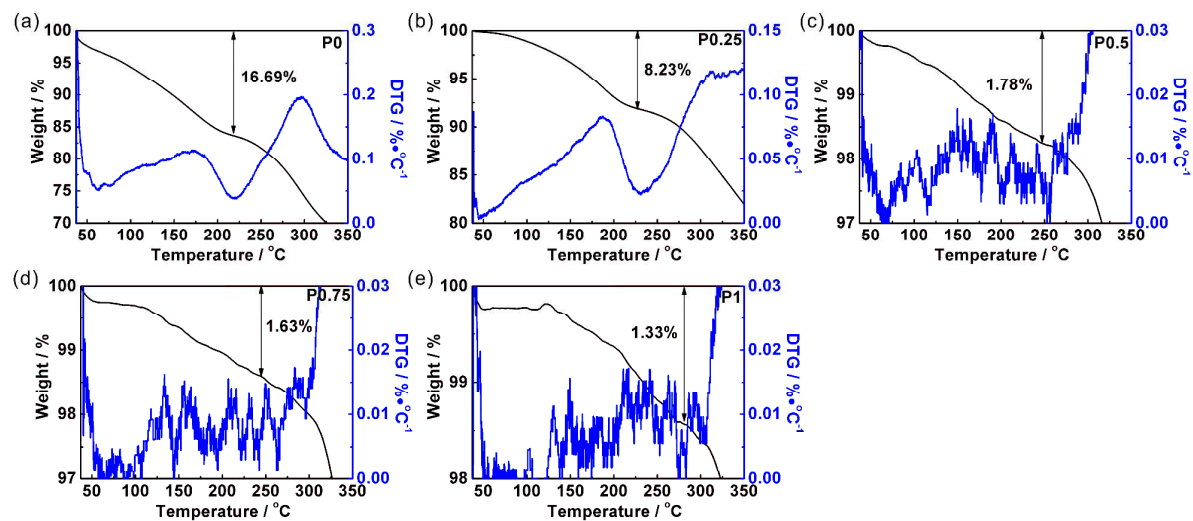


Figure S1. Thermogravimetric analysis (TGA) plots with corresponding derivatives (DTG) of P0(a), P0.25(b), P0.5(c), P0.75(d) and P1(e).

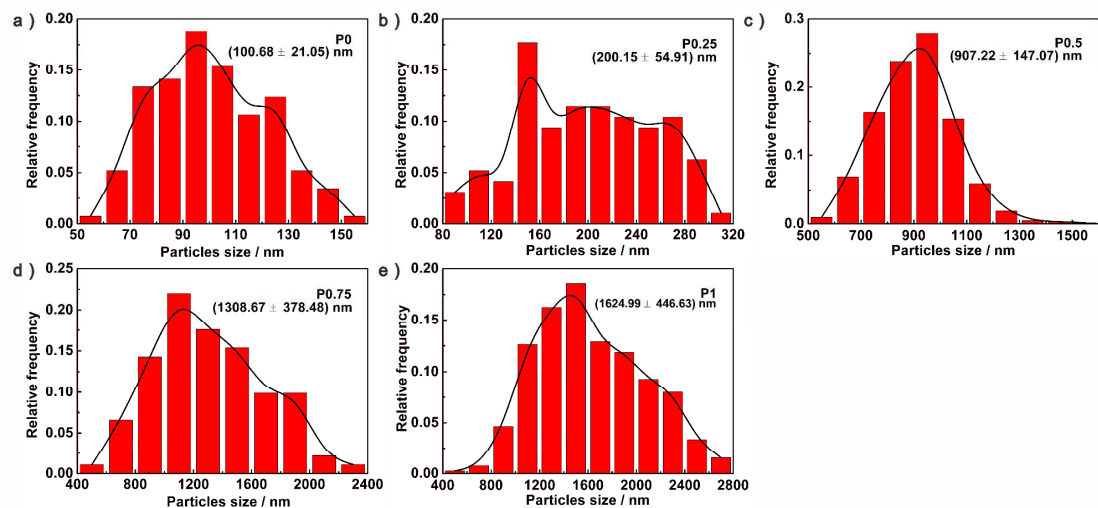


Figure S2. Size distribution of P0 (a), P0.25 (b), P0.5 (c), P0.75 (d) and P1 (e).

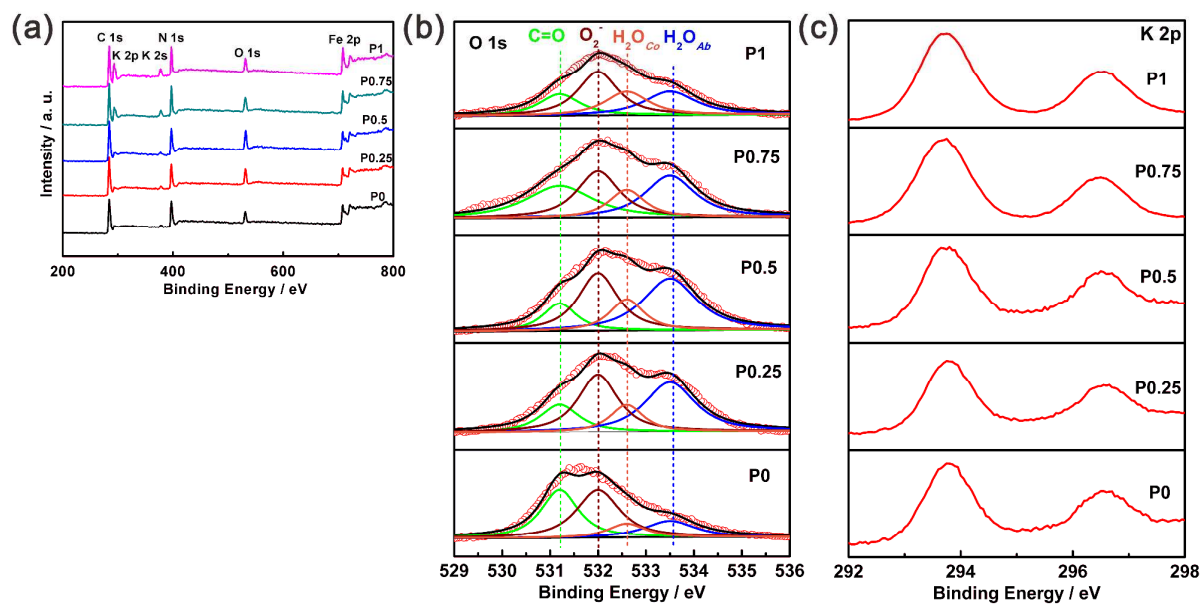


Figure S3. The XPS general spectra (a), the high-resolved XPS spectra of O 1s (b) and K 2p (c).

Table S1. Chemical composition of all PB samples (wt%).

Sample	Fe	K	C	N	Water content
P0	(35.69±0.59) %	(13.00±0.08) %	(17.98±0.17) %	(20.99±0.31) %	(16.69±0.28) %
P0.25	(35.75±0.16) %	(13.08±0.11) %	(20.79±0.38) %	(24.26±1.10) %	(8.23±0.24)%
P0.5	(36.96±0.18) %	(13.60±0.11) %	(21.98±0.38) %	(25.65±1.04) %	(1.78±0.10)%
P0.75	(36.65±0.31) %	(13.89±0.20) %	(22.18±0.44) %	(25.88±0.96) %	(1.63±0.07)%
P1	(32.99±1.93) %	(22.02±0.12) %	(20.26±0.85) %	(23.64±0.40) %	(1.33±0.05)%

Table S2. Results of the Rietveld refinements for the PB products.

Samples	a / Å	b / Å	c / Å	α / °	β / °	γ / °
P0	10.190	10.190	10.190	90.000	90.000	90.000
P0.25	10.200	10.200	10.200	90.000	90.000	90.000
P0.5	10.203	10.203	10.203	90.000	90.000	90.000
P0.75	10.150	7.216	6.935	90.000	91.176	90.000
P1	10.162	7.291	6.962	90.000	90.654	90.000

Section S1. Conversion relationship between yields and absorbance at 700 nm excitation.

The in-situ time-resolved UV-vis absorbance data is converted to yields with Lamber-Beer's Law, which demonstrates the linear relationship between product absorbance and corresponding concentration. The referential conversion relationship between absorption and product concentration is built through measuring the absorbance of a series of corresponding product standard solution containing PVP at 700 nm excitation. The converted results have to be calibrated due to the interference induced by the initial absorbance in the system. Thus, we built a conversion relationship from absorption (A) to corresponding concentration (C) based on Lamber-Beer Law with 0 correction:

$$C = a \cdot A + b$$

And all the relevant parameters are listed in Table S3.

Table S3. Parameters for conversion relationship between absorbance and yield

Sample	a / mmol•L ⁻¹	b / mmol•L ⁻¹
P0	2.790±0.132	0.045±0.003
P0.25	0.803±0.085	-(0.047±0.004)
P0.5	1.301±0.091	-(0.135±0.012)
P0.75	0.807±0.062	-(0.077±0.006)
P1	1.225±0.092	-(0.445±0.034)