

Supplementary

Boron Nitride Nanosheets/PNIPAM Hydrogels with Improved Thermo-Responsive Performance

Shishan Xue ¹, Yuanpeng Wu ^{1,2*}, Jiemin Wang ³, Meiling Guo ¹, Dan Liu ^{3*} and Weiwei Lei ^{3*}

¹ School of Material Science and Engineering, Southwest Petroleum University, Chengdu 610500, China; 201711000008@stu.swpu.edu.cn (S.X.); 201621000011@stu.swpu.edu.cn (M.G.)

² State Key Laboratory of Oil and Gas Reservoir Geology and Exploitation, Southwest Petroleum University, Chengdu 610500, China

³ Institute for Frontier Materials, Deakin University, Locked Bag 2000, Geelong, VIC 3220, Australia; jiemin@deakin.edu.au

* Correspondence: ypwu@swpu.edu.com (Y.W.); dan.liu@deakin.edu.au (D.L.); weiwei.lei@deakin.edu.au (W.L.); Tel.: +86-028-8303-7404 (Y.W.)

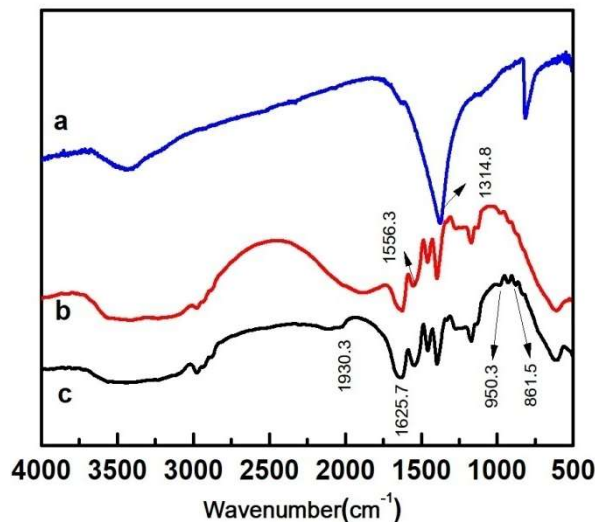


Figure S1. FT-IR spectra of (a) BNNS-NH₂, (b) pure PNIPAM hydrogels and (c) PNIPAM/BNNS-NH₂ hydrogels.

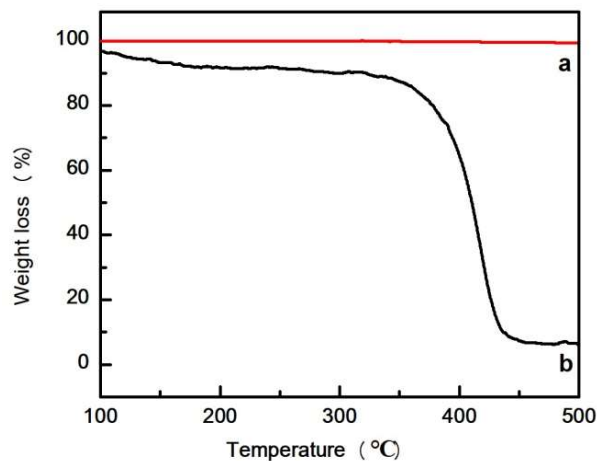


Figure S2. TGA curves of BNNS-NH₂ (a) and PNIPAM/BNNS-NH₂ hydrogels with the concentration of BNNS-NH₂ is 0.06 mg/mL (b).

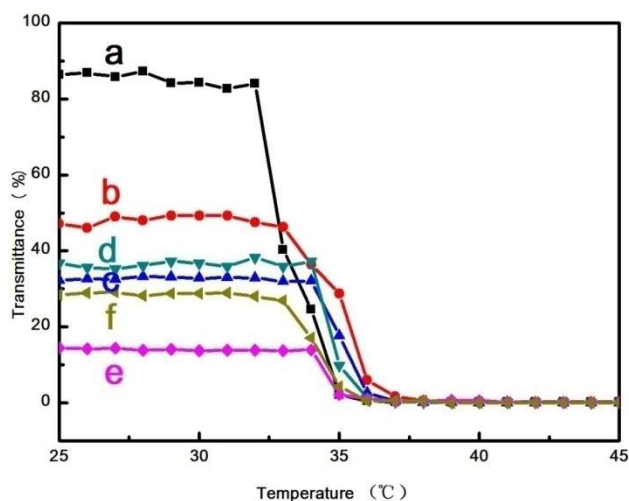


Figure S3. LCST of the hydrogels (a) pristine PNIPAM, (b) PNIPAM with BNNS-NH₂ concentration of 0.02 mg/mL, (c) PNIPAM with BNNS-NH₂ concentration of 0.04 mg/mL, (d) the PNIPAM with BNNS-NH₂ concentration of 0.06 mg/mL, (e) the PNIPAM with BNNS-NH₂ concentration of 0.10 mg/mL, (f) the PNIPAM with BNNS-NH₂ concentration of 0.20 mg/mL. (The transmittance is tested at 700 nm of UV-vis.).

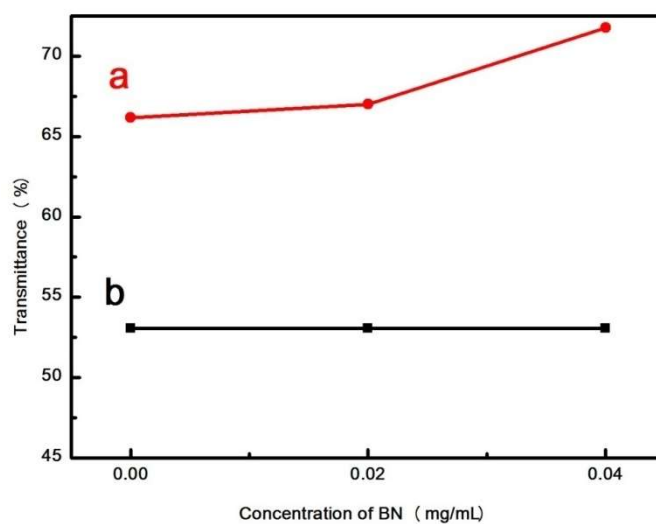


Figure S4. Transmittance of dye solution after dye penetrant test (a) the dye solution which were put inside the hydrogels with different concentration BNNS-NH₂ for 2 days, (b) the original dye solution. (The transmittance is tested at 610 nm of UV-vis).

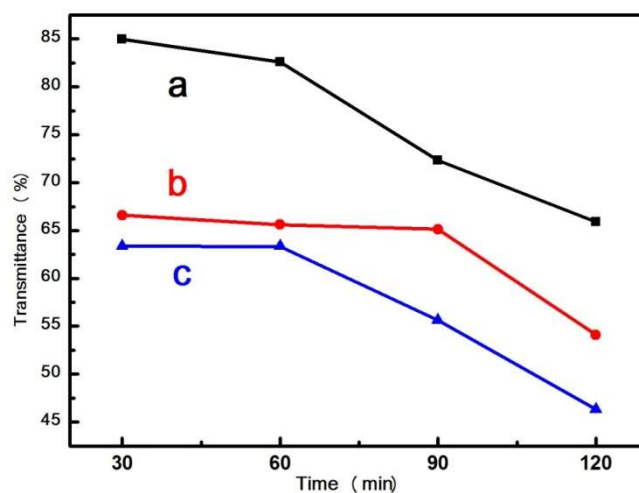


Figure S5. Transmittance of the dye solution after dye release test (a) the hydrogel without BNNS-NH₂ in hot water, (b) the hydrogel with the BNNS-NH₂ concentration of 0.02 mg/mL, (c) the hydrogel with the BNNS-NH₂ concentration of 0.04 mg/mL (The transmittance is tested at 610 nm of UV-vis.).



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