

Electronic Supporting Information (ESI) for

**A novel efficient cationic flocculant prepared through grafting
two monomers onto chitosan induced by Gamma radiation**

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The following is included as additional supplementary materials for this paper:

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Table A Levels of the variable tested in the 2^3 central composite designs

Variable	Range and levels				
	-2	-1	0	1	2
X1, coagulant dosage / mg L ⁻¹	0	440	880	1320	1760
X2, flocculant dosage, PAM / mg L ⁻¹	0	10.0	20.0	30.0	40.0
X2, flocculant dosage, chitosan-g-PAM-g-PDMC / mg L ⁻¹	0	7.5	15.0	22.5	30.0
X3, pH	2.0	4.5	7.0	9.5	12.0

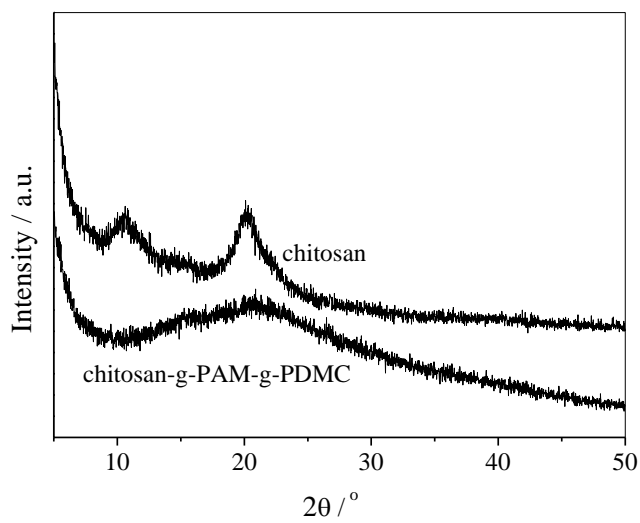


Fig. A XRD of chitosan and chitosan-g-PAM-g-PDMC

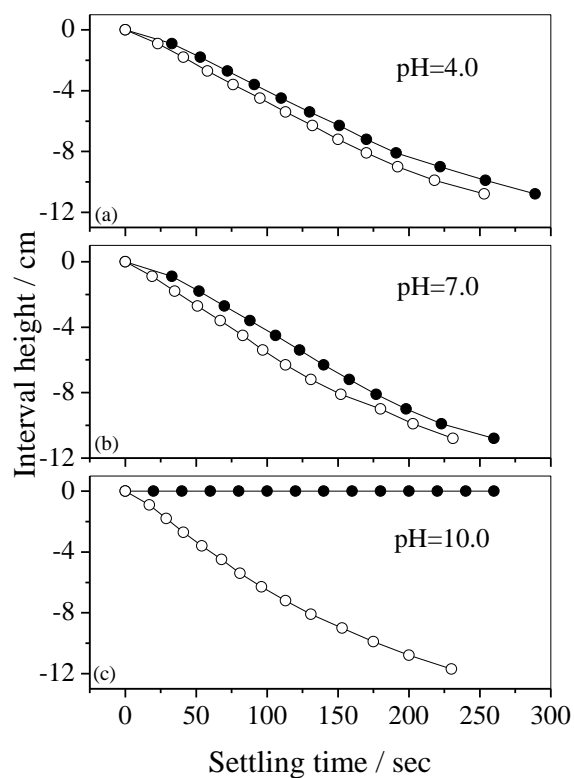
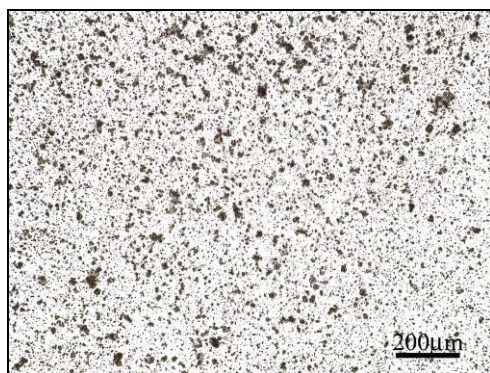
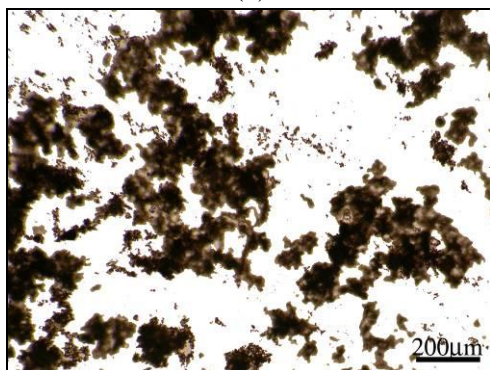


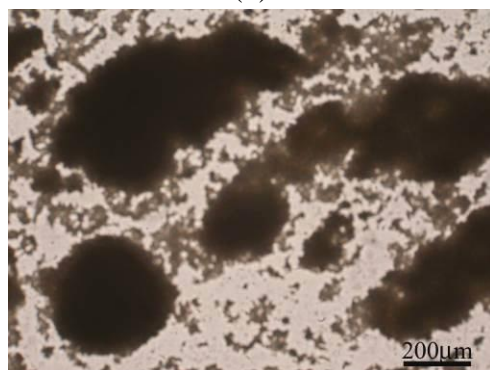
Fig. B Comparison of settling rate of the floccules treated with chitosan and chitosan-g-PAM-g-PDMC at (a) pH 4.0; (b) pH 7.0; and (c) pH 10.0. ●-: chitosan; ○-: chitosan-g-PAM-g-PDMC



(a)



(b)



(c)

Fig. C Images of floccules from kaolin suspension treated with: (a) no flocculant; (b) chitosan; and (c) chitosan-g-PAM-g-PDMC