

Supplementary Information

Polyaniline and Sodium Alginate Nanocomposite: A pH- Responsive Adsorbent for Removal of Organic Dyes from Water

Deola Majhi¹ and Braja N. Patra^{2*}

¹School of Chemistry, Sambalpur University, Sambalpur, Odisha, India -768019

²Department of Chemistry, Utkal University, Bhubaneswar, Odisha, India -751004

Telephone No: 91-8895019001

E –mail: brajapatra@gmail.com

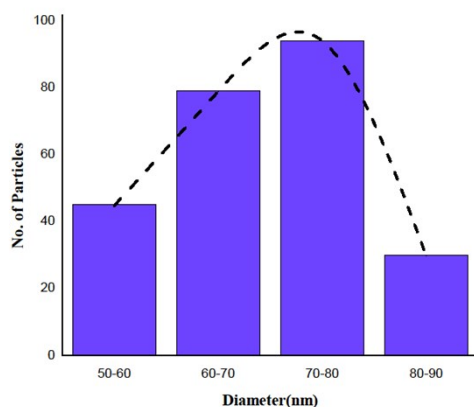


Fig. S1: Particle size distribution of PANI/SA nanocomposite as determined by TEM

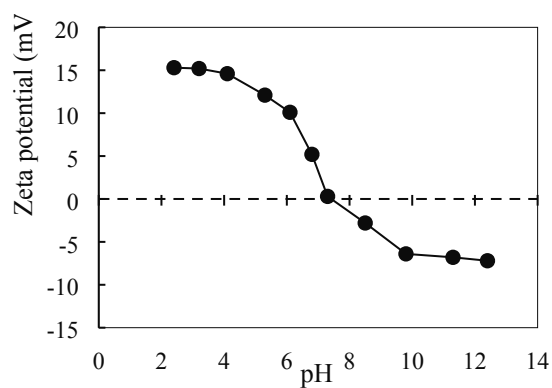
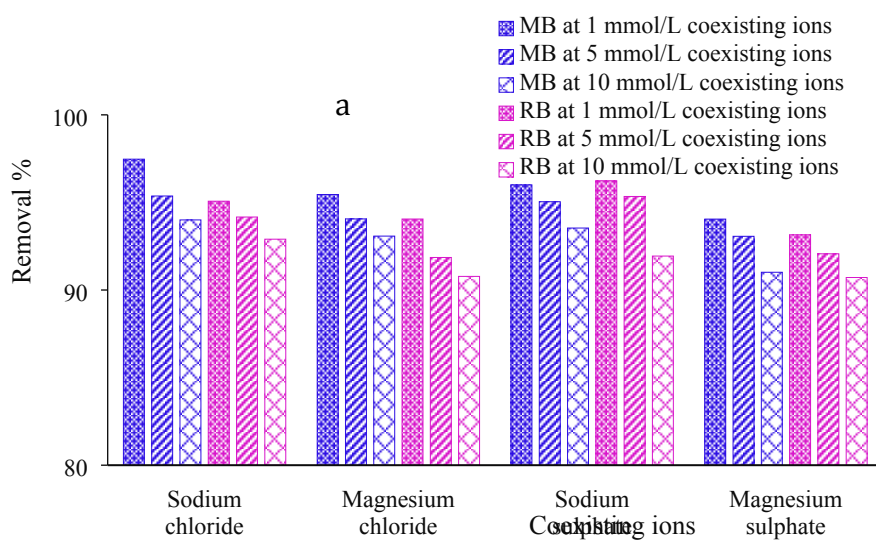


Fig. S2: Zeta potential of PANI/SA nanocomposites



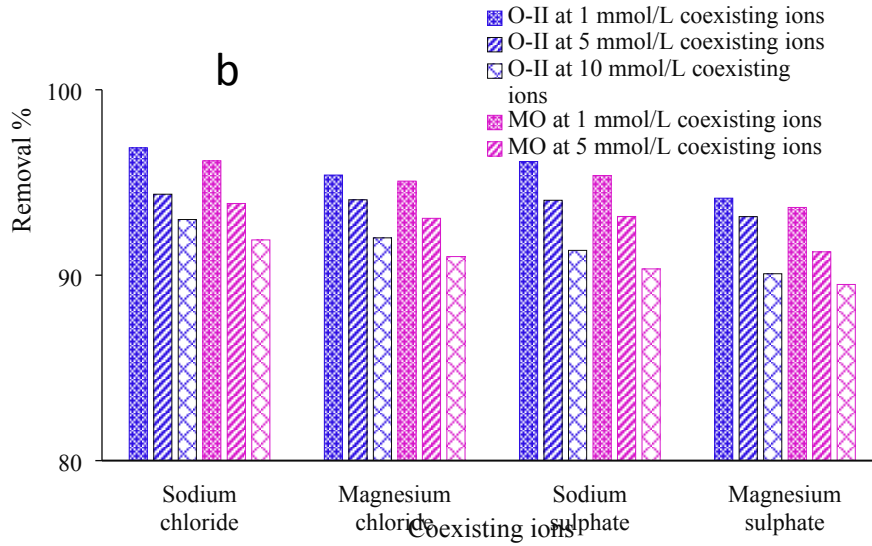
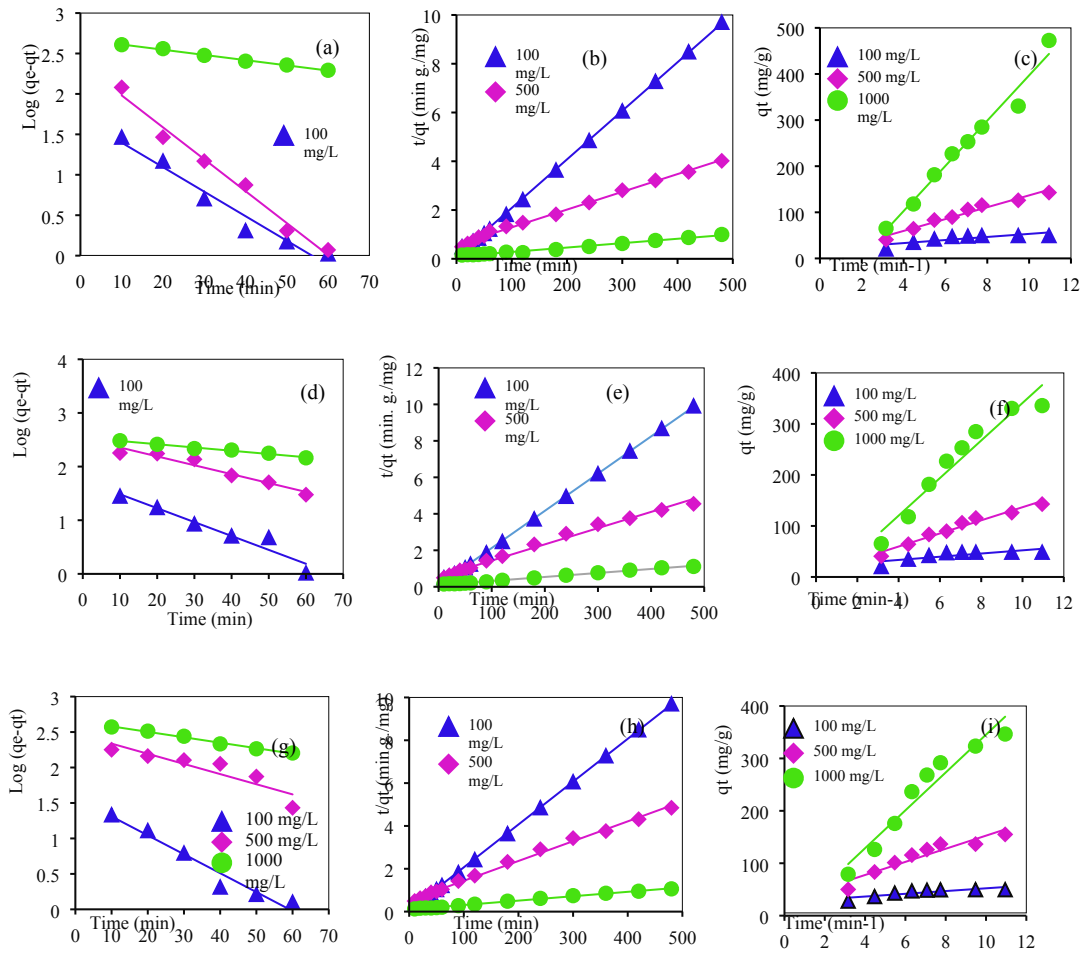


Fig.S3: Concentration profile of MB/RB at pH 9 (a) and O-II/MO at pH 3 (b) in presence of different ionic strength



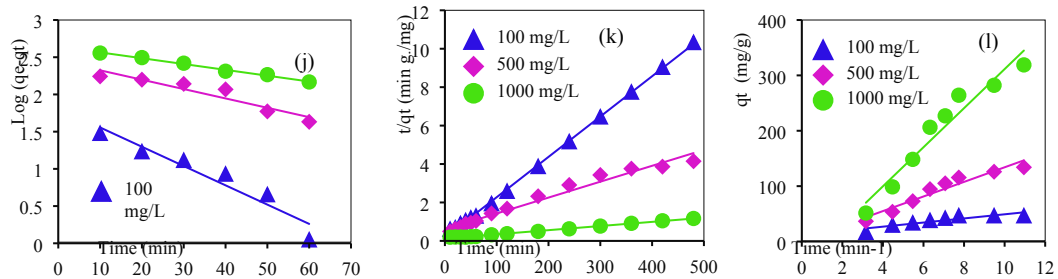
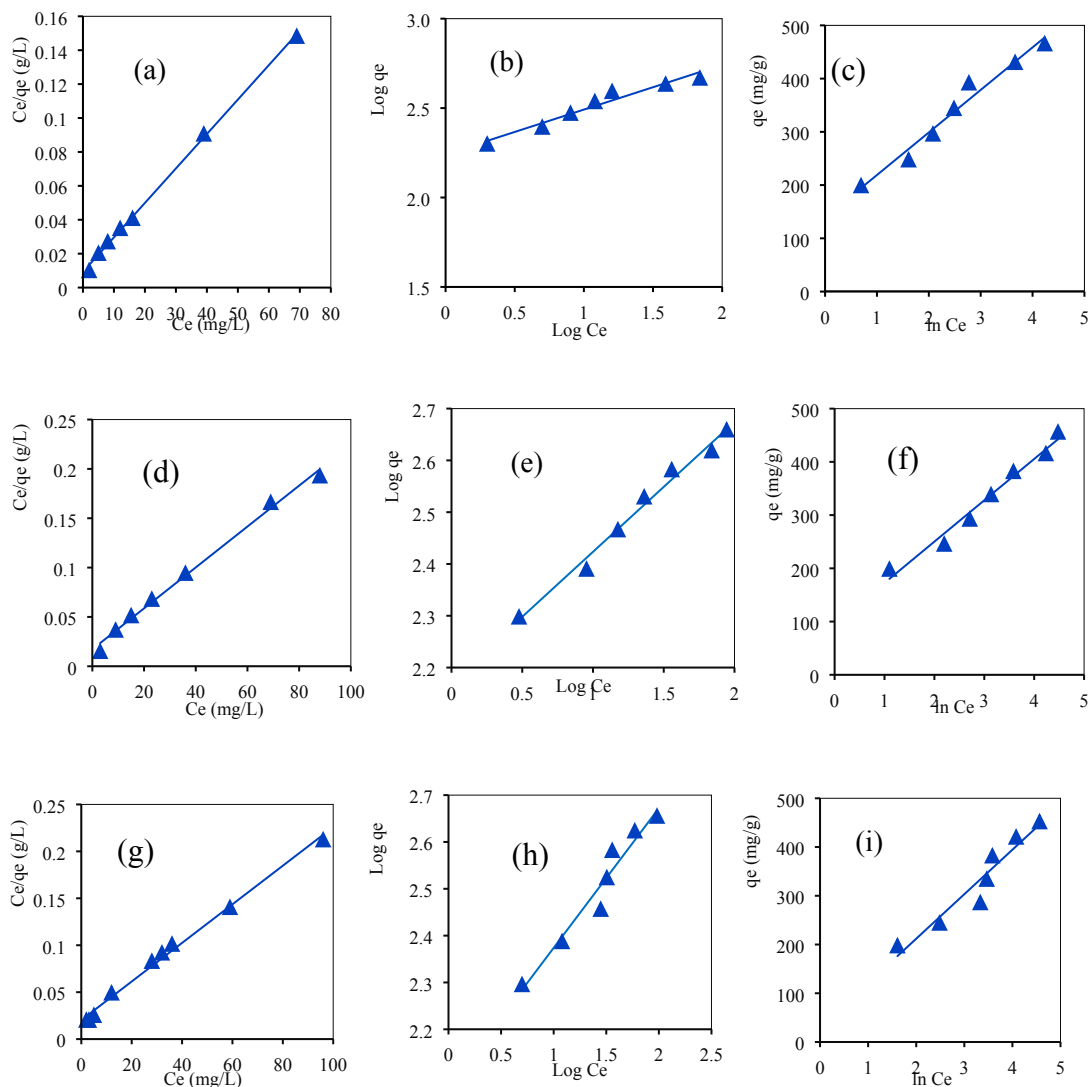


Fig. S4: Modelling of the adsorption kinetics of RB, MB, O-II and MO using (a), (d), (g), (j) as pseudo-first-order; (b), (e), (h), (k) as pseudo-second-order; (c), (f), (i), (l) as intra-particle diffusion onto PANI/SA nanocomposite.



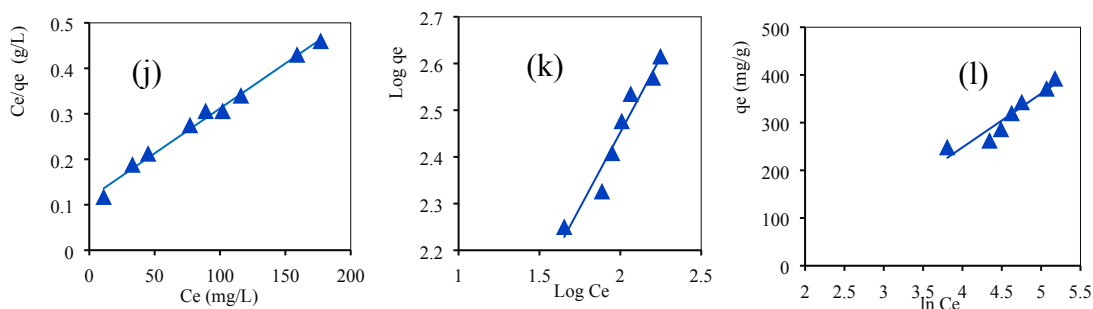


Fig. S5: Modelling of the adsorption isotherm of RB, MB, O-II and MO using (a), (d), (g), (j) as Langmuir isotherm; (b), (e), (h), (k) as Freundlich isotherm; (c), (f), (i), (l) as Temkin isotherm onto PANI/SA nanocomposite

Table-S1: Comparison of dye removal (MB, RB, O-II, MO) properties with other reported pH responsive adsorbents:

Adsorbents	Dyes	Q max(mg/g)	ref
GO/PNA	RB	193.05	1
BSA_Au NCs	MB	345	2
DMC/AA	MB	386.4	3
PANI/SA	MB	555	This work
	RB	435	
	O-II	476	
	MO	417	
Exf.LT/AP-g-p(DEAEMA)	MB	599	4
	MO	558	

References:

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3. R. Wei, W. Song, F. Yang, J. Zhou, M. Zhang, X. Zhang, W. Zhao and C. Zhao, *Ind. Eng. Chem. Res.* 2018, **57**, 8209-8219.
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