Selective adsorption of azine group containing pesticides on carbon-based materials

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Supplementary Information

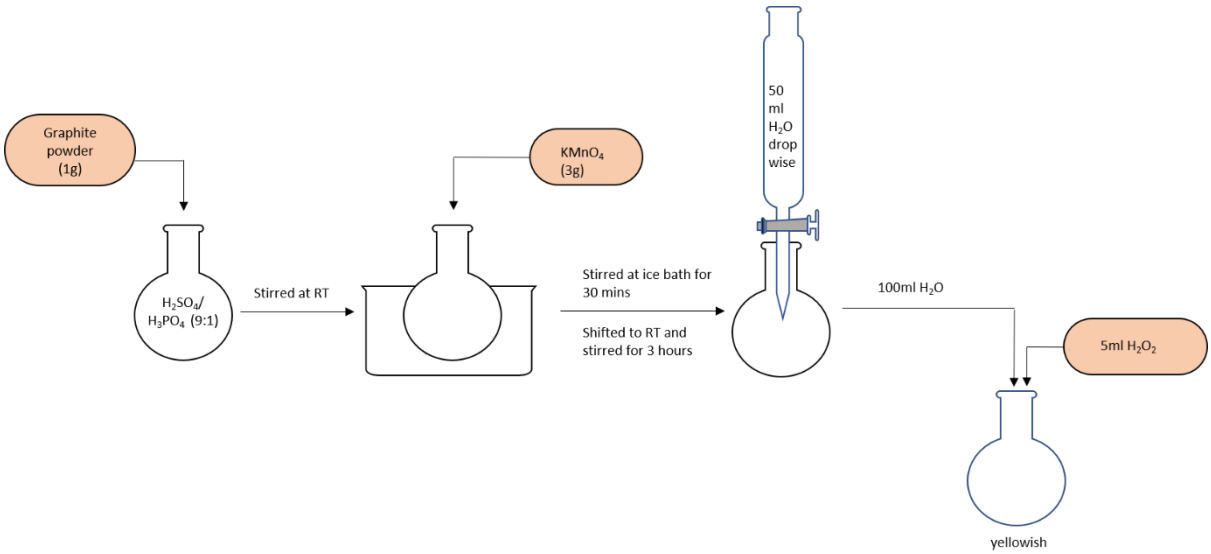


Fig S1: Synthetic scheme for Graphene Oxide (GO)

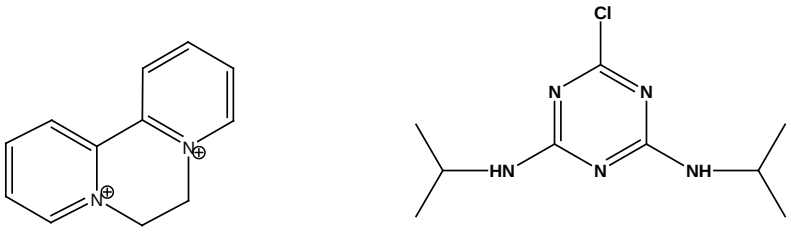


Fig S2: Structure of Diquat (on left) (DIQ) and Atrazine (on right) (ATR)

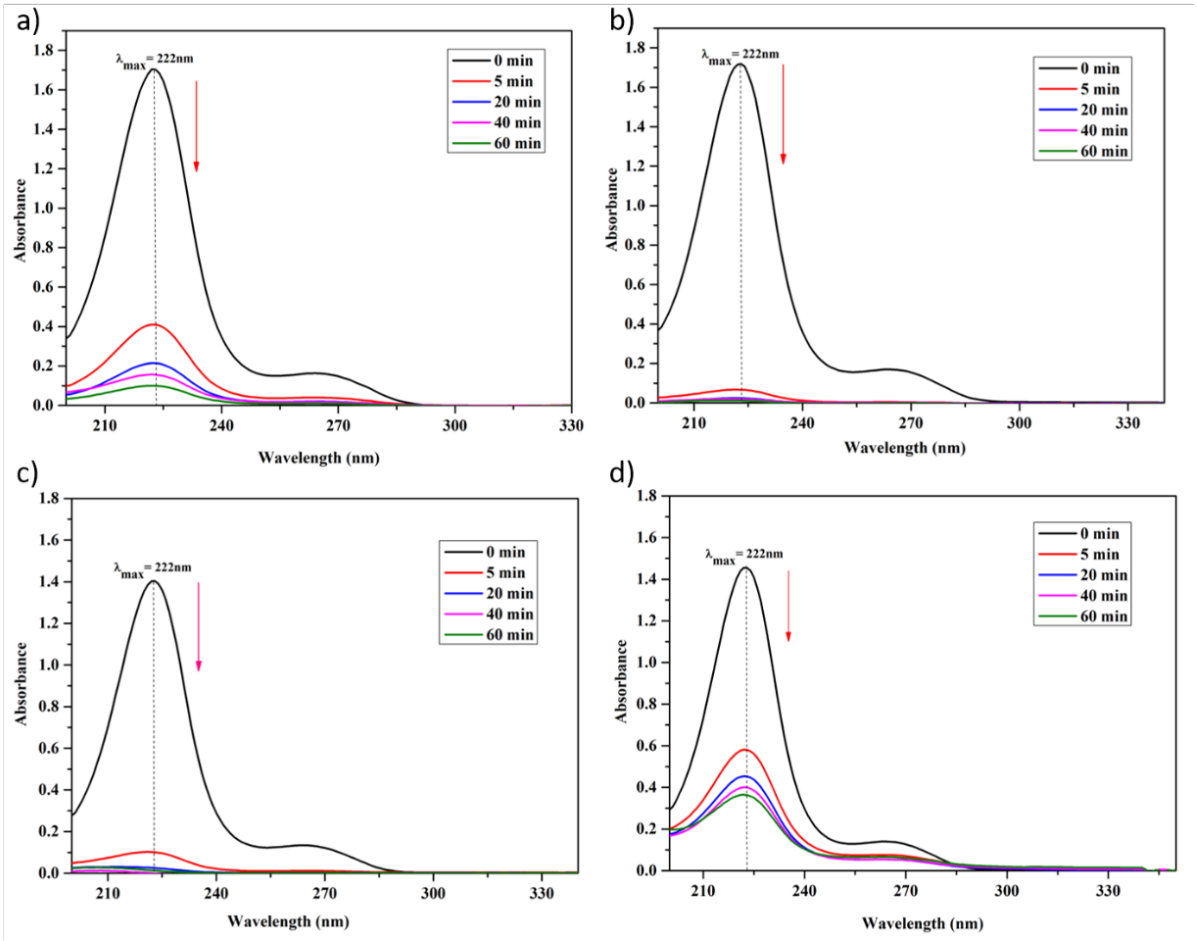
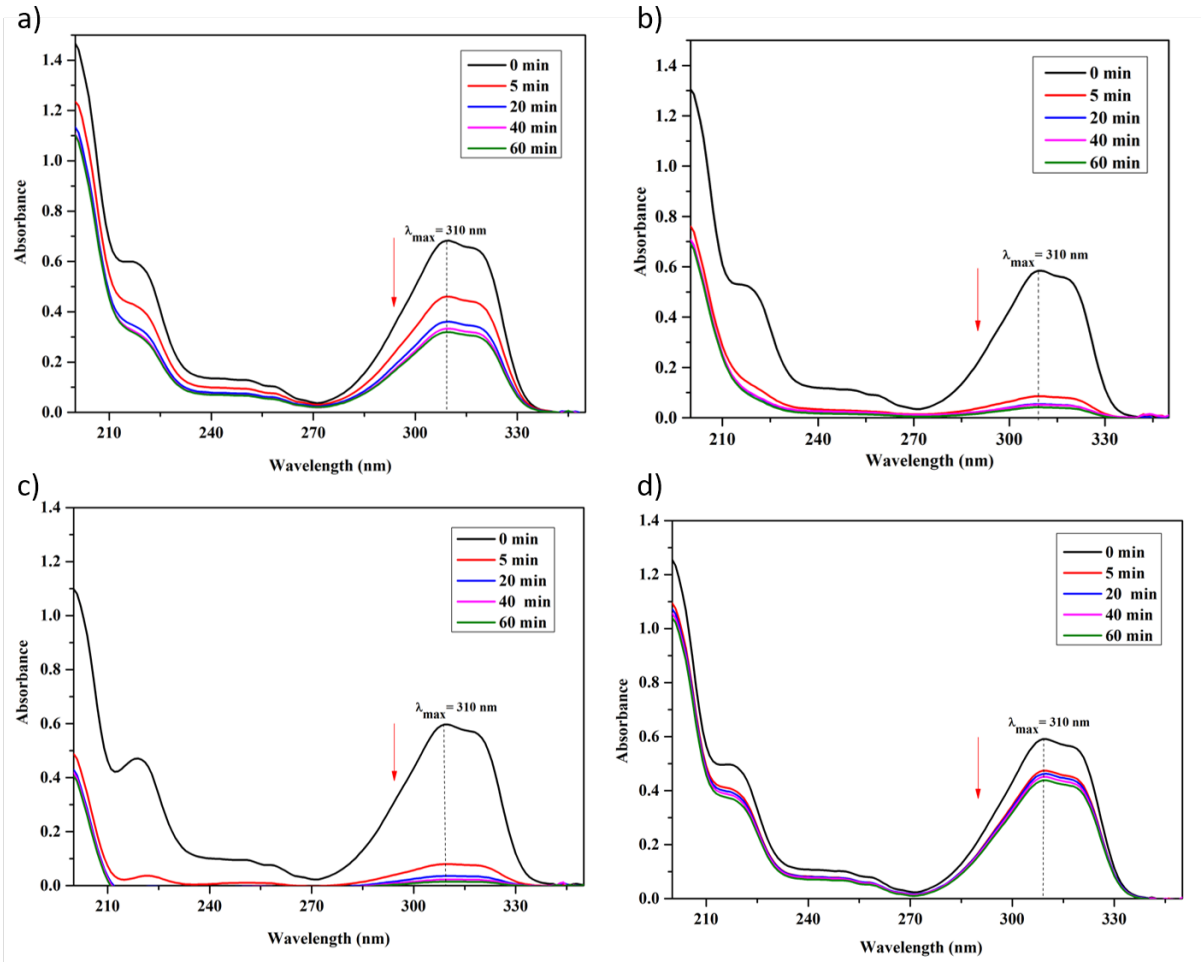


Fig S3 : Time dependent UV-Visible spectra of adsorption of ATR (25 ml solution of 10 ppm concentration) with varible concentrations of adsorbents a) ATR +AC(2.5 mg) b) ATR + AC(5 mg) c) DIQ+AC (10 mg) d) DIQ + GO (10 mg)



FigS4: Time dependent UV-Visible spectra of adsorption of DIQ (25 ml solution of 10 ppm concentration) with varible concentrations of adsorbents a) GO(2.5 mg) b) GO(5 mg) c) GO (10 mg) d) AC (10 mg)

Table S1 : Adsorption efficency data for all set of experiments performed for 60 minutes each.

Adsorbent		Adsorbate (10 ppm)	Adsorption Efficiency (%)
Name	Amount (mg)		
GO	10	DIQ	97.49
	5	DIQ	92.81
	2.5	DIQ	53.30
	10	ATR	74.91
AC	10	ATR	99.99
	5	ATR	99.35

	2.5	ATR	94.13
	10	DIQ	25.88

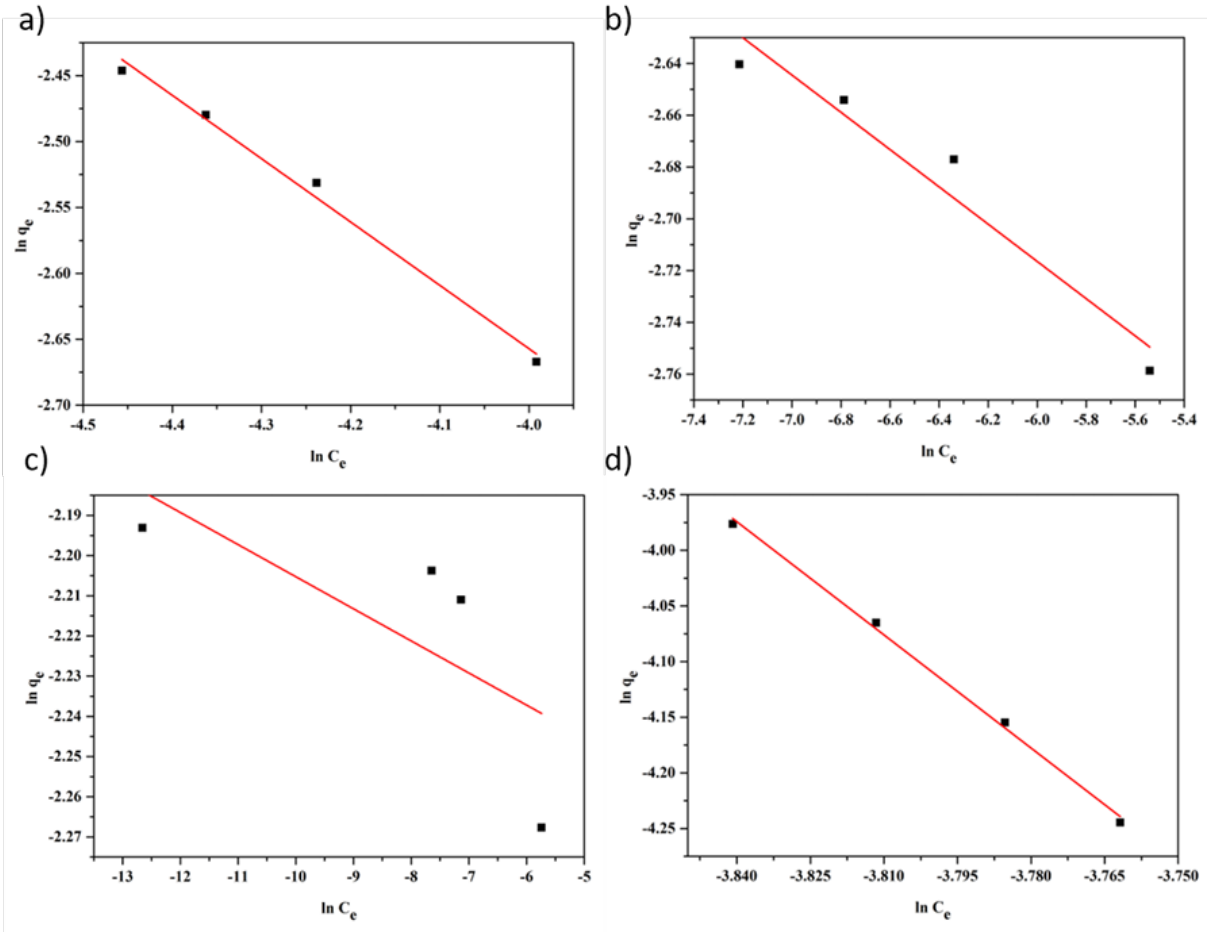


Fig S5: Freundlich Adsorption isotherm for a) ATR on GO b) DIQ on GO c) ATR on AC d) DIQ on AC

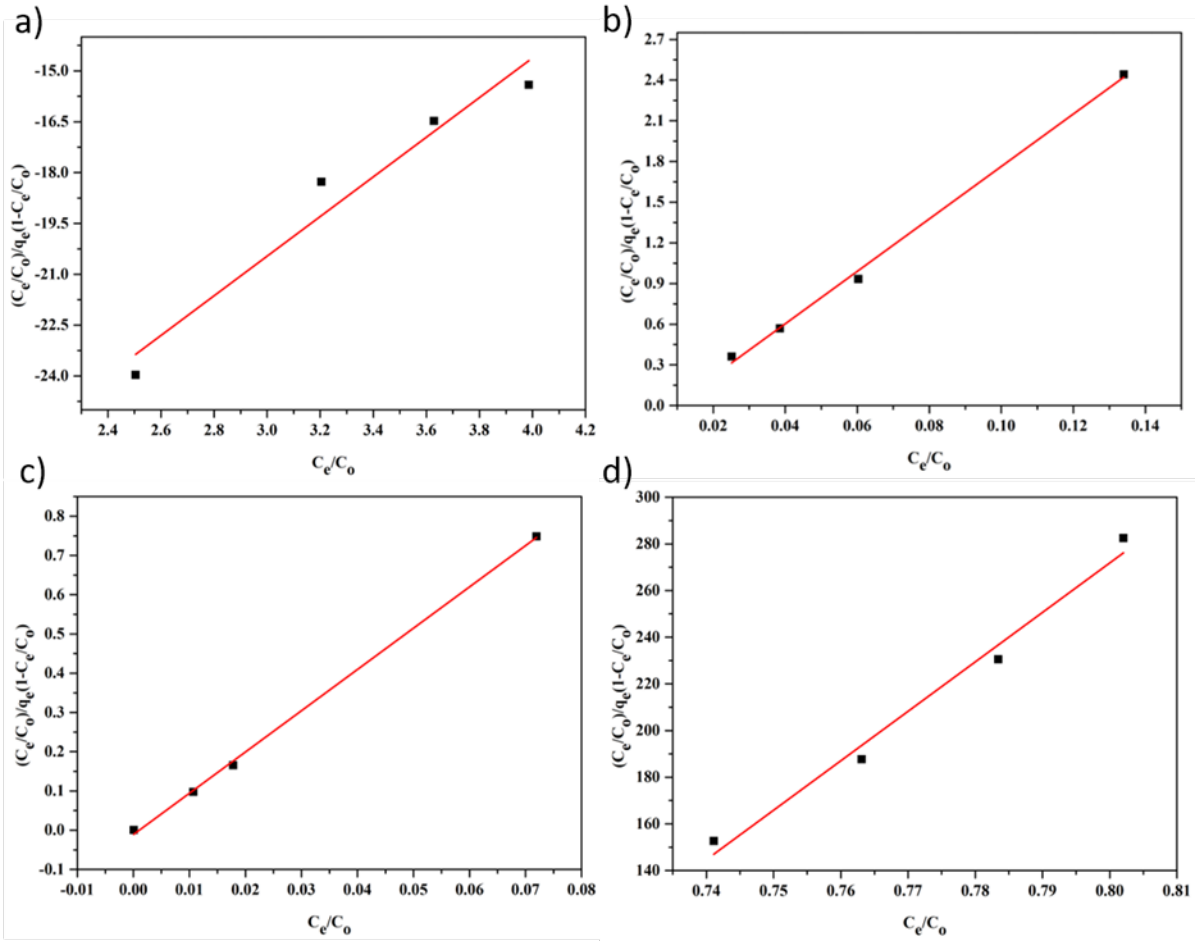


Fig S6: BET Adsorption isotherm for a)ATR on GO b) DIQ on GO c) ATR on AC d) DIQ on AC

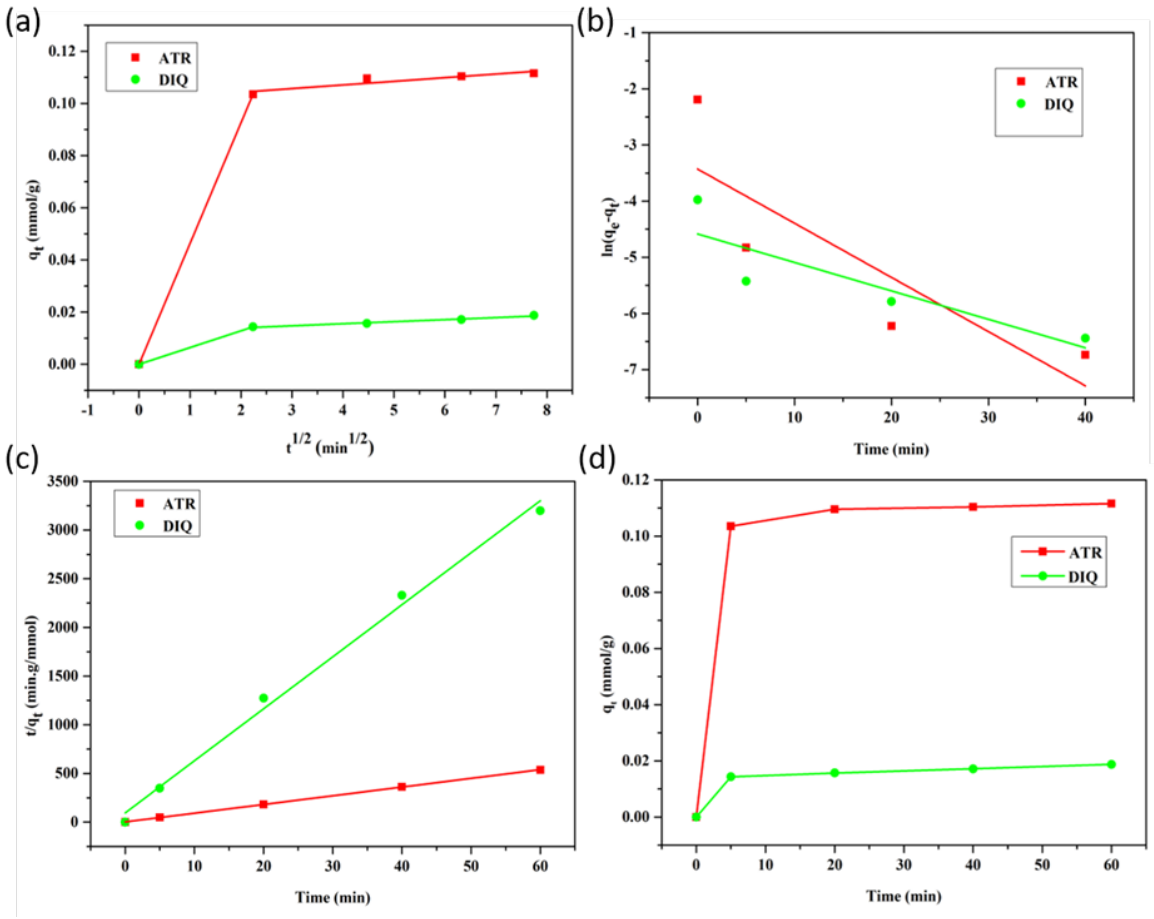


Fig S7: Adsorption kinetics for AC based on a) Amount adsorbed vs time b) Pseudo first order c) Pseudo second order d) Intraparticle diffusion model