

Supplementary Material

Aqueous Adsorptive Removal of Bisphenol A Using Tripartite Magnetic Montmorillonite Composites

Okon E. Okon ^{1,2,*}, Edu J. Inam ^{1,2,*}, Nnanake-Abasi O. Offiong ³ and Ukana D. Akpabio ¹

- ¹ Department of Chemistry, University of Uyo, Uyo 520001, Nigeria;
okonokon100@gmail.com (O.E.O.); ukanaakpabio@uniuyo.edu.ng (U.D.A.)
- ² International Centre for Energy and Environmental Sustainability Research (ICEESR),
University of Uyo, Uyo 520001, Nigeria
- ³ Department of Chemical Sciences, Topfaith University, Mkpatak 530109, Nigeria;
no.offiong@topfaith.edu.ng
- * Correspondence: eduinam@uniuyo.edu.ng

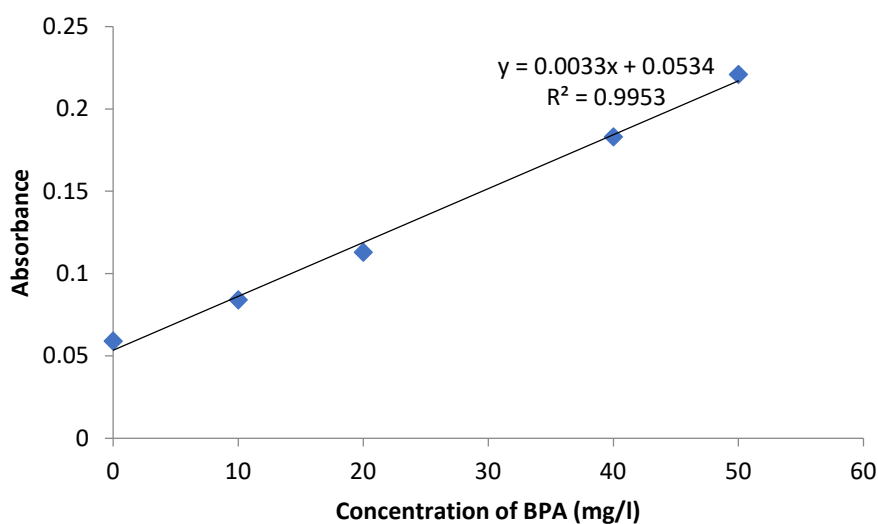


Figure S1. UV-visible absorbance to concentration plot for the BPA at 278cm⁻¹

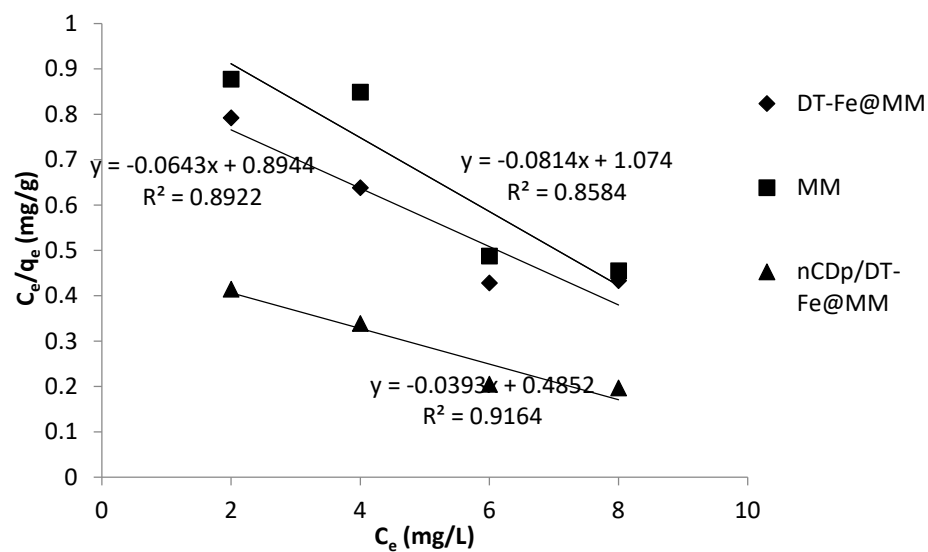


Figure S2. Langmuir isotherm model fitting for adsorption of BPA on different adsorbents (Adsorption conditions: Initial Conc.10-50 mg/L; dosage = 0.02g/L; t = 120 minutes; pH =8)

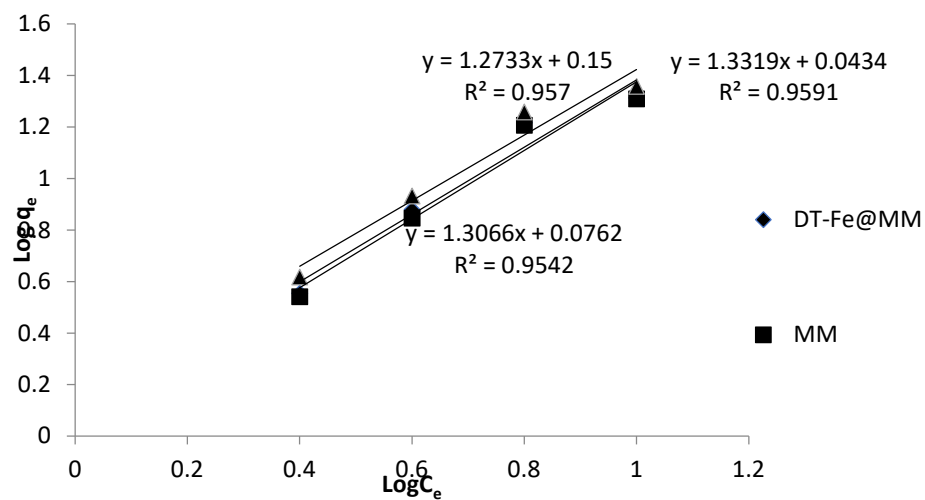


Figure S3. Freundlich isotherm model fitting for adsorption of BPA on different adsorbents (Adsorption conditions: Initial Conc.10-50 mg/L; dosage = 0.02g/L; t = 120 minutes; pH =8)

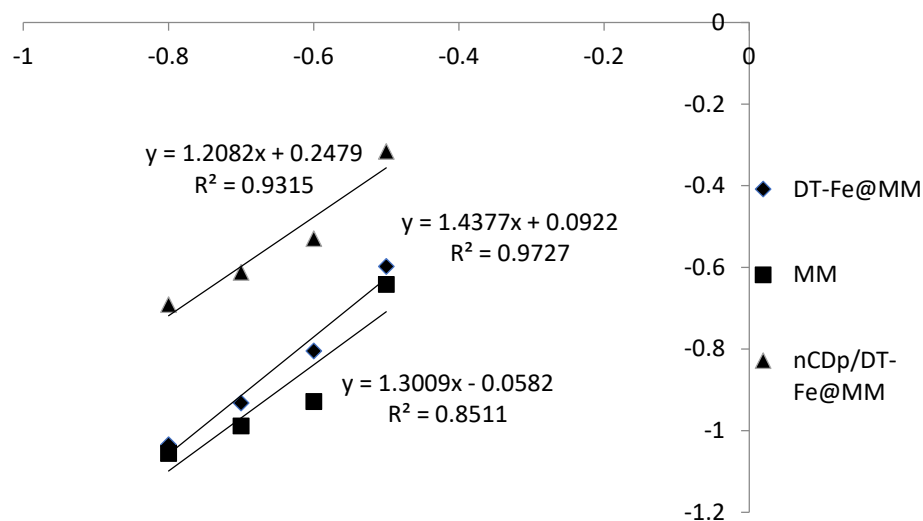


Figure S4. Flory-Huggins isotherm model fitting for adsorption of BPA on different adsorbents (Adsorption conditions: Initial Conc.10-50 mg/L; dosage = 0.02g/L; t = 120 minutes; pH =8)

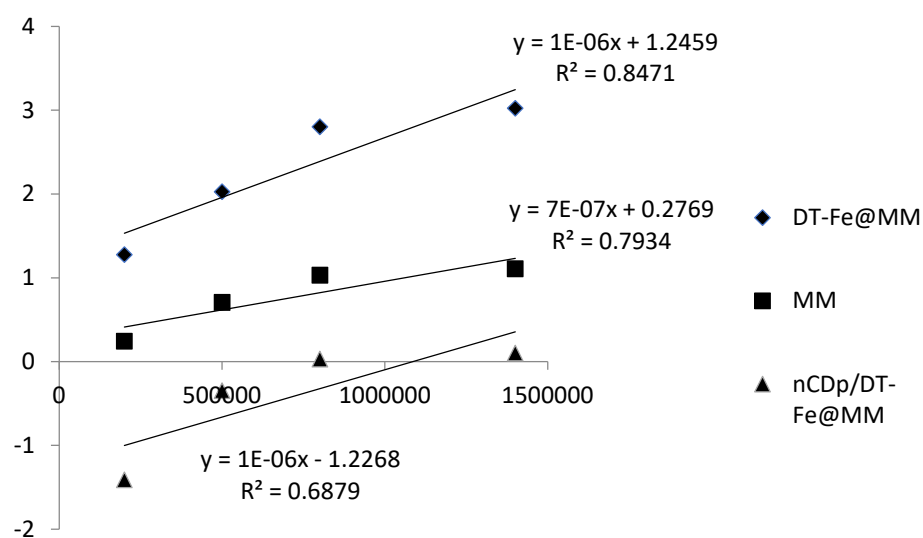


Figure S5. Dubinin Radushkevich isotherm model fitting for adsorption of BPA on different adsorbents (Adsorption conditions: Initial Conc.10-50 mg/L; dosage = 0.02g/L; t = 120 minutes; pH =8)

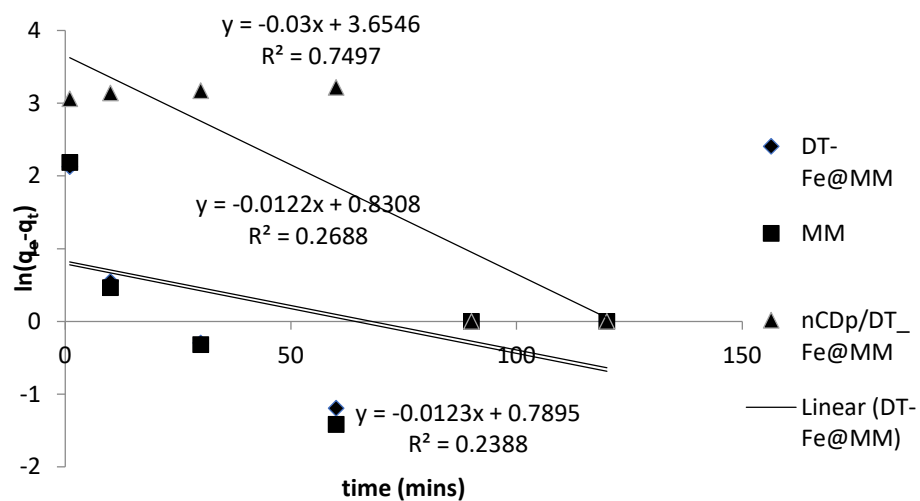


Figure S6. Pseudo-first-order kinetic model fitting for adsorption of BPA on different adsorbents (Adsorption conditions: Initial Conc.10-50 mg/L; dosage = 0.02g/L; t = 120 minutes; pH =8)

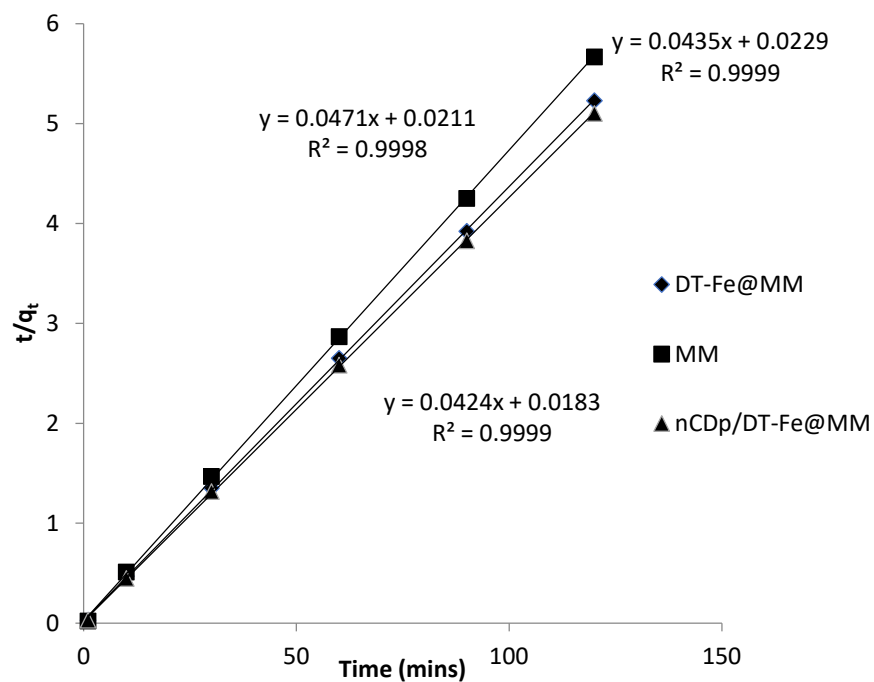


Figure S7. Pseudo-second-order kinetic model fitting for adsorption of BPA on different adsorbents (Adsorption conditions: Initial Conc.10-50 mg/L; dosage = 0.02g/L; t = 120 minutes; pH =8)

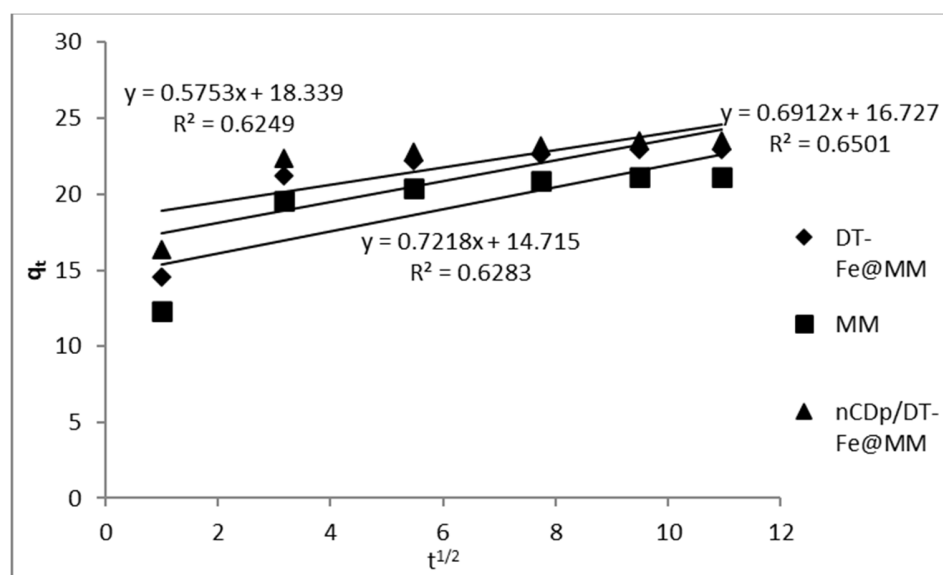


Figure S8. Intra-particle diffusion kinetic model fitting for adsorption of BPA on different adsorbents (Adsorption conditions: Initial Conc.10-50 mg/L; dosage = 0.02g/L; t = 120 minutes; pH =8)

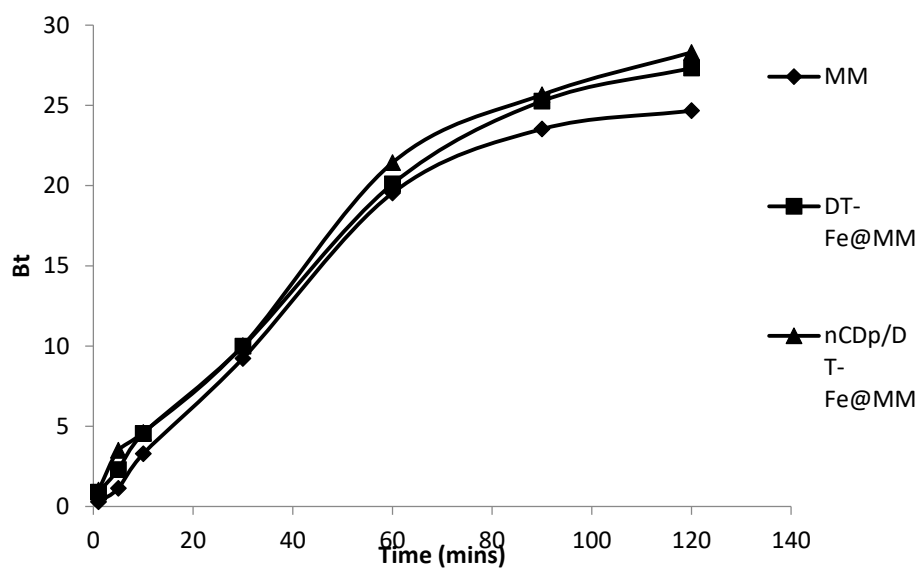


Figure S9. Boyd model plot for unmodified and modified montmorillonite adsorbents at 50mg/l adsorbate concentration

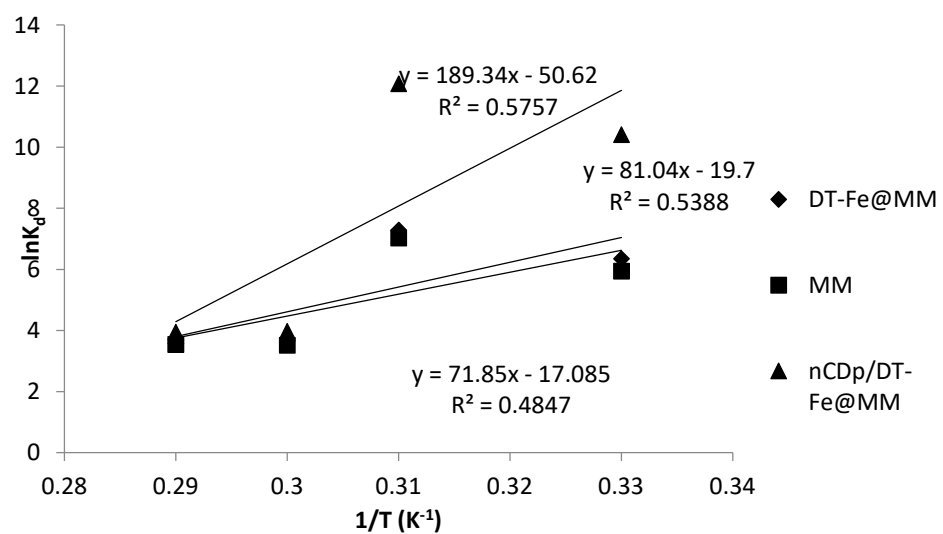


Figure S10. Thermodynamic model fitting for adsorption of BPA on different adsorbents (Adsorption conditions: Initial Conc.10-50 mg/L; dosage = 0.02g/L; t = 120 minutes; pH =8)