Electronic Supporting Information (ESI)

Novel nitrogen self-doped hydrochar from Siam weed (*Chromolaena odorata* L.) leaves for a highly efficient crystal violet removal from water

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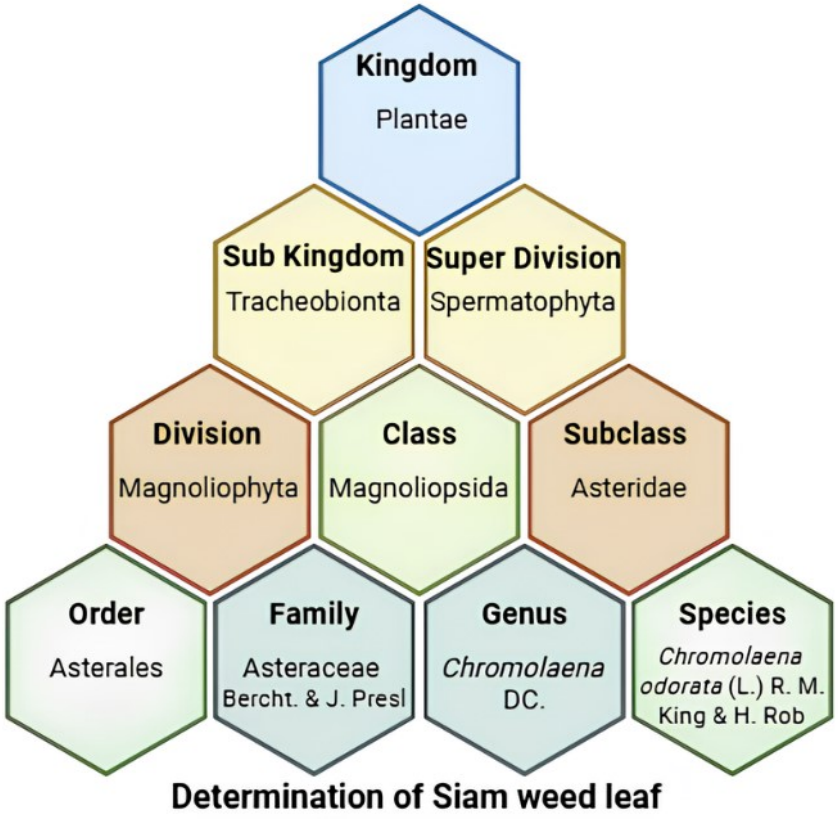

Fig. S1 The plant determination with classification and taxonomy of SW leaves.

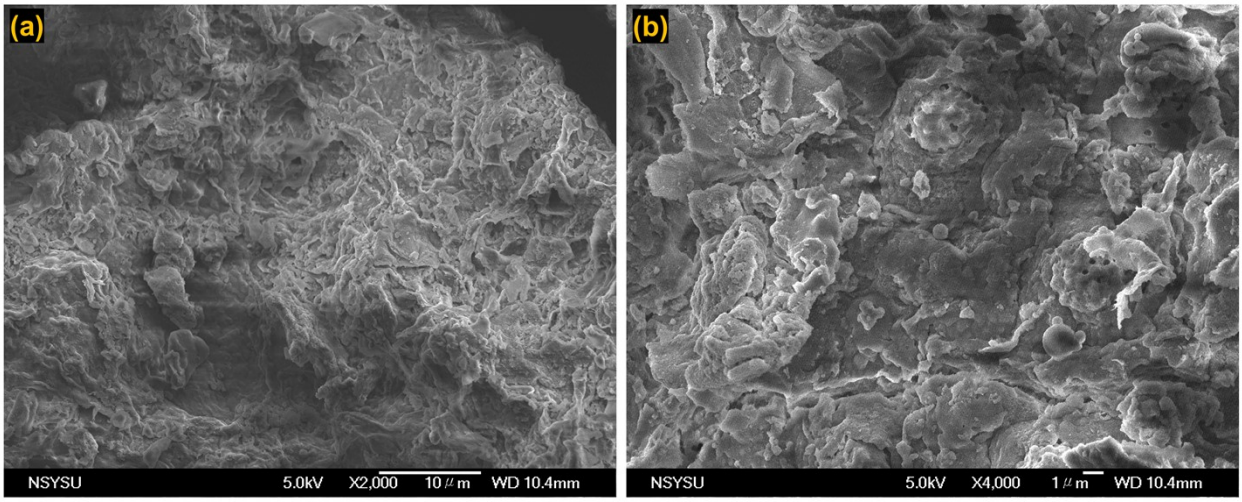

Fig. S2 The SEM images of pristine HC with (a) 2000× and (b) 4000x magnifications

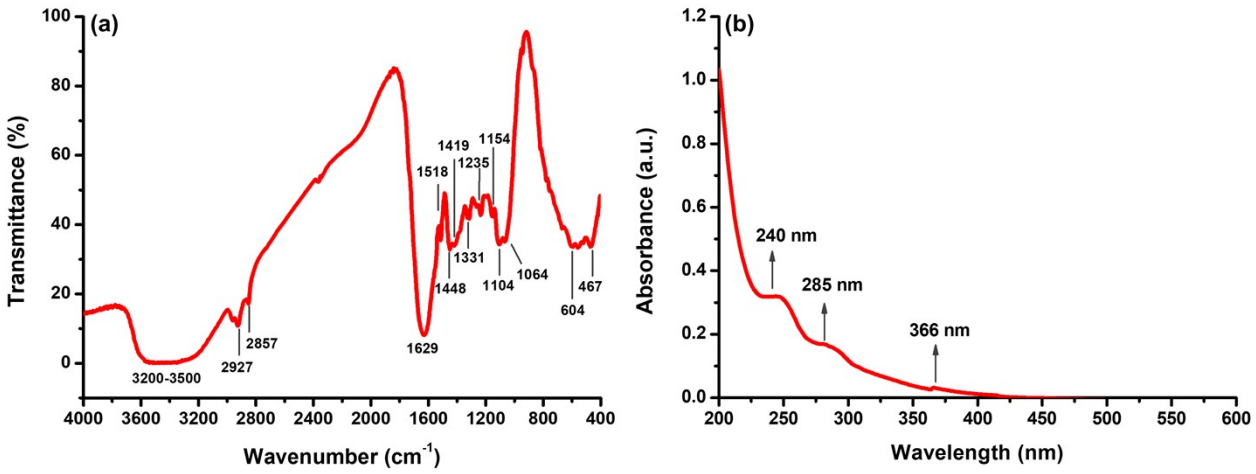

Fig. S3 The (a) FTIR spectrum and (b) UV-vis spectrum of NSD-HC.

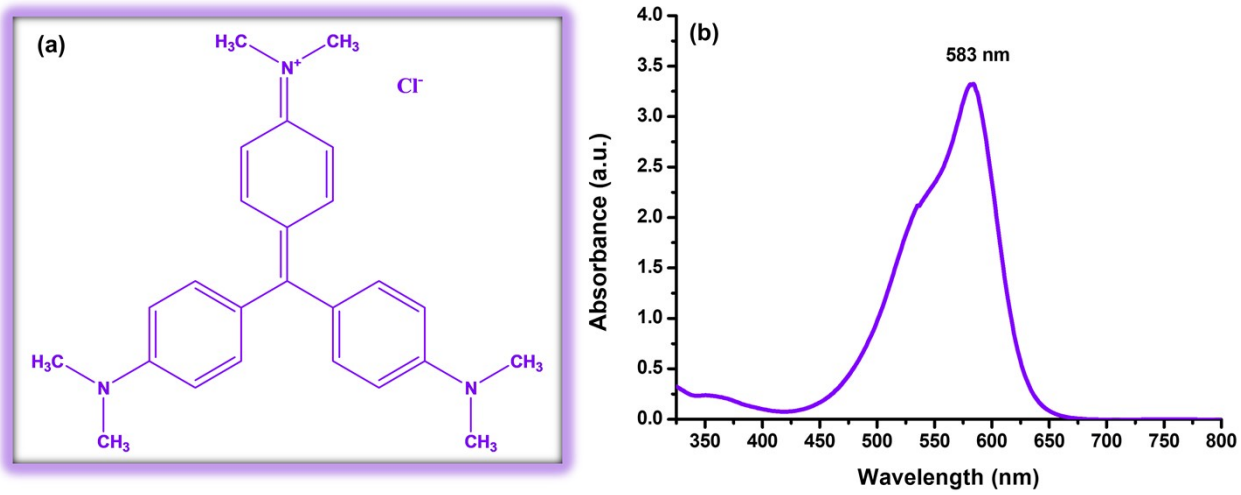

Fig. S4 (a) The molecular structure of CV and (b) the UV-vis spectrum of CV in water.

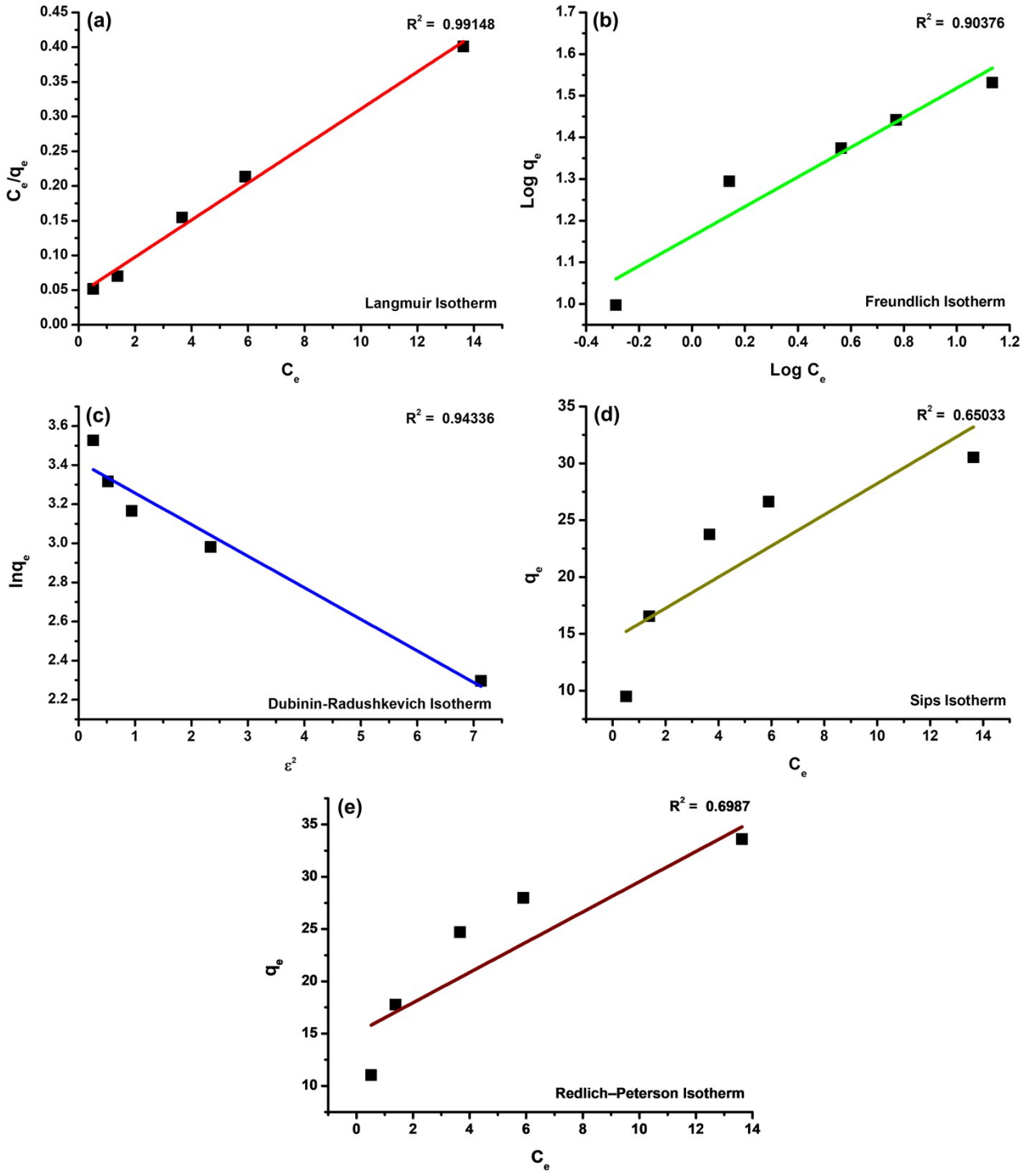

Fig. S5 The plots of (a) the Langmuir, (b) Freundlich, (c) Dubinin-Radushkevich, (d) Sips, and (e) Redlich-Peterson isotherm models for the adsorption of CV.

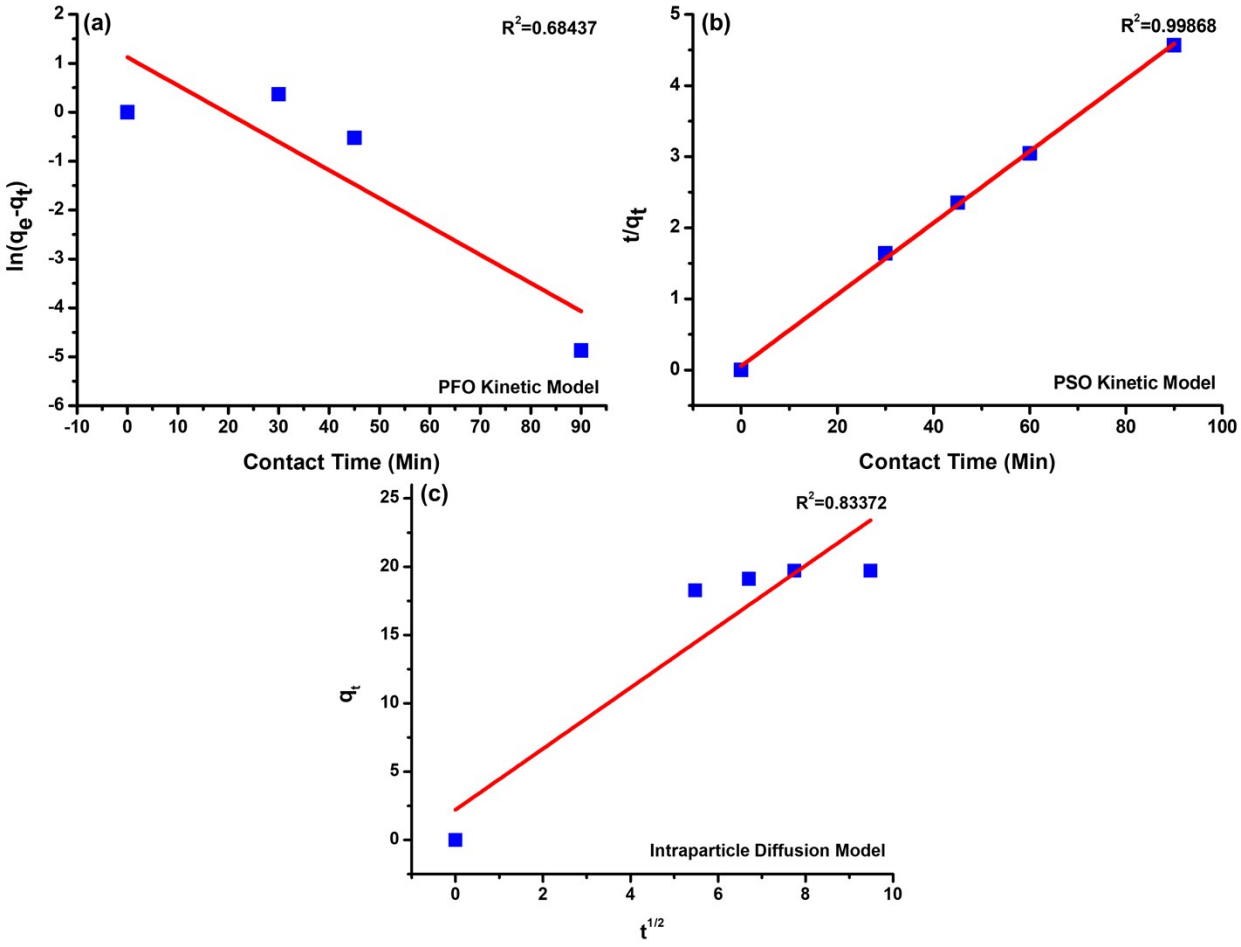

Fig. S6 The plots of (a) Pseudo-first-order kinetic, (b) Pseudo-second-order kinetic, and (c) intraparticle diffusion models for the CV adsorption.

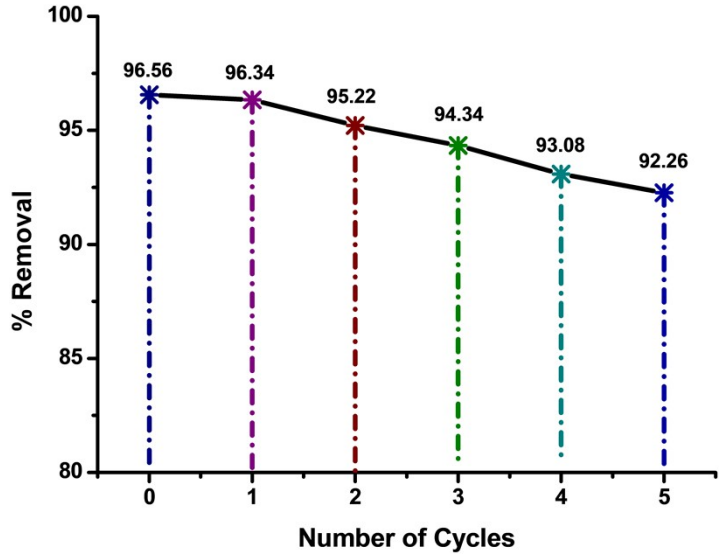

Fig. S7 Removal efficiency (%) of 100 μM CV onto 10 mg NSD-HC over five consecutive cycles using 70% ethanol as desorbing agent.