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Application of *Ulva lactuca* and *Systoceira stricta* algae-based activated carbons to hazardous cationic dyes removal from industrial effluents

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Résumé :

Marine algae *Ulva lactuca* (ULV-AC) and *Systoceira stricta* (SYS-AC) based activated carbons were investigated as potential adsorbents for the removal of hazardous cationic dyes. Both algae were surface oxidised by phosphoric acid for 2 and subsequently air

activated at 600 °C for 3 h. Dyes adsorption parameters such as solution pH, contact time, carbon dosage, temperature and ionic strength were measured in batch experiments. Adsorption capacities of 400 and 526 mg/g for Malachite green and Safranin O by the SYS-AC and ULV-AC respectively were significantly enhanced by the chemical treatments. Model equations such as Langmuir, Freundlich and Temkin isotherms were used to analyse the adsorption equilibrium data and the best fits to the experimental data were provided by the first two isotherm models. BET, FT-IR, iodine number and methylene blue index determination were also performed to ...