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Porous Chitosan/Hydroxyapatite Composite Membrane for Dyes Static and Dynamic Removal from Aqueous Solution

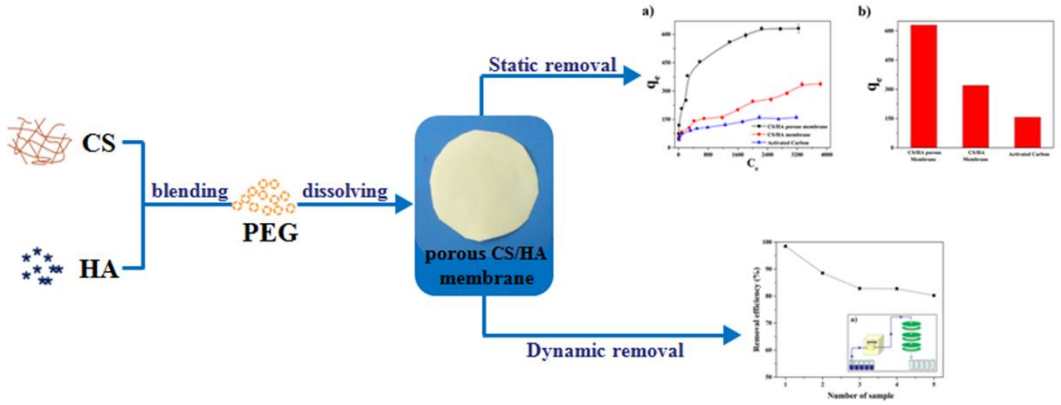
Chaoting Shi,[a] Caizhi Lv,[a] Lan Wu*[a], Xiandeng Hou[b]

[a]Analytical & Testing Center, Sichuan University, Chengdu, Sichuan 610064, China

[b]College of Chemistry, Sichuan University, Chengdu, 610064, China

*Corresponding author: wulan@scu.edu.cn

Graphical Abstract:



Highlights

- Integration of appreciably high adsorption capacity and the high-speed dynamic dye removal.
- Synthesis protocol is much simpler, environmental-friendly and economical.
- The proposed membrane featured repeated dye removal.

Abstract:

The unique characteristics of Chitosan (CS) such as resource abundance, good biocompatibility, film-forming ability and sufficient sites (–NH_2 and –OH) for adsorption of heavy metals or organic pollutants make CS-based membranes a promising membrane adsorbent. In this work, a porous Chitosan/Hydroxyapatite