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ACCEPTED MANUSCRIPT

Impact of sodium hypochlorite cleaning on the surface

properties and performance of PVDF membranes

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Highlights:

- The effect of NaClO cleaning on physicochemical properties, surface free energy, and fouling propensity of polyvinylidene fluoride (PVDF) membranes was systemically investigated.
- The Analysis of Variance analysis showed that the soaking time of NaClO had a more significant effect on the physicochemical properties of PVDF membrane compared to NaClO concentration.
- The membrane surface energy assessed via XDLVO theory was changed due to NaClO cleaning.
- NaClO cleaning could be harmful to the membrane physicochemical properties, surface energy and anti-fouling performance.

Abstract:

The adverse effect of sodium hypochlorite (NaClO) cleaning has raised concerns

regarding their potential impacts on the membrane materials and activated sludge. In this

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