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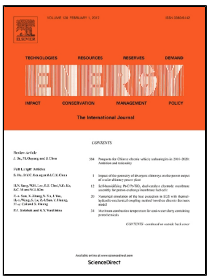

Performance analysis of a solar photochemical photovoltaic hybrid system for decolorization of Acid Red 26 (AR 26)

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Highlights：

1. The hybrid system combing homogenous photochemical with photovoltaics was firstly performed.
2. Solar/$K_2S_2O_8$ and solar/H_2O_2 is comparative analysis in the decolorization of AR 26.
3. $K_2S_2O_8$ can be activated by heat and irradiation simultaneously in the hybrid system.
4. The PV panel of the hybrid system could work under lower temperature.
5. Solar spectrum could be made full use for power generation and water purification.