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Evaluation of the potential of dimethyl phthalate degradation in aqueous using sodium percarbonate activated by discharge plasma

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Abstract: Phthalates, as additives in the plastic production process, were able to enter the water environment, causing huge risks to ecological environment and human health. The potential of phthalates elimination in aqueous using sodium percarbonate (SPC) activated by discharge plasma (marked as “SPC + plasma”) was evaluated, with dimethyl phthalate (DMP) as a model pollutant. Experimental results showed that about 92.1% of DMP was eliminated in the “SPC + plasma” system with the treatment time of 30 min, which was 30.7% higher than that in sole plasma system, and the synergetic intensity for DMP elimination reached up to 127.0; and the energy yield was also raised by 131%. H₂O₂ and ·OH radicals formation were promoted but

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