Title of proposed research:

Study on removal of Red Congo and Orange Methyl compounds in the textile dyeing industrial wastewater by the homogeneous ozonation process.

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Abstract:
Nowadays, according to the development of industrialization and modernization, water environment in industrial, urban, craft village and rural areas is being seriously polluted by many various wastewater sources of toxic contaminants. One of these polluted sources is the textile industrial wastewater. Especially, textile industry in Vietnam always accounts a high proportion of the total export turn-over and almost dyes used in dyeing industry are azo organic dyes due to cheap price, high dyeing efficiency. Indeed, Red Congo and Orange Methyl dyes are widely used in the textile industry. Thus, they are needed to be controlled before discharging into the environment. Ozone (O_3) is a strong oxidant, directly reacts to dyes with very high reaction kinetic constants from 10^5 to 10^7 $M^{-1}s^{-1}$. Thus, homogeneous ozonation process can treat dyes effectively and products of these reactions are biodegradable compounds or CO_2 and H_2O in completely happening reactions.
Therefore, this project with removal of dyes as red congo and orange methyl compounds in textile dyeing industrial wastewater is proposed and studied. Indeed, the advantage configuration of homogeneous ozonation process will be investigated by completely happened reaction and quick reaction time with these compounds.