

Oxidation of CHF₃ in a Coaxial Dielectric Barrier Discharge Plasma Reactor

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Decomposition of CHF₃ is high potential reduce greenhouse gases because the 100 years global warming potential of CHF₃ is 12000. Non-thermal plasma is one of methods attractive for decomposition of CHF₃. In this study, oxidation of CHF₃ performed in a coaxial dielectric barrier discharge reactor was immersed in an electrically insulating oil bath. Effect of several factors on the reaction investigated, namely, applied voltage, applied frequency, initial CHF₃ concentration in the feed gas. These factors were examined on the decomposition of CHF₃ and product components.