



SDI Review Form 1.6

Journal Name:	International Research Journal of Pure and Applied Chemistry
Manuscript Number:	2014_IRJPAC_11796
Title of the Manuscript:	Matrix isolation and computational studies of benzoyl chloride photolysis
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<u>Compulsory</u> REVISION comments		
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments	The study is of highly academic interest and informative. The UV light photolysis ($\lambda > 260$ nm) of benzoyl chloride was investigated in a cryogenic Ar matrix, using FT-IR spectroscopy and computational methods (MP2, B3LYP, CCSD, and SACCI). The photolysis products were chlorobenzene and CO. An intermediate species, 6-chloro-2,4-cyclohexadien-1-ylidenemethanone (CCHM), was identified from the MP2 calculations. A minor product, CF, was also observed. Three transition states were found on the reaction potentials, according to B3LYP calculations. Manuscript is well written and the results are interpreted systematically. The manuscript deserves publication without revision.	

Reviewer Details:

Name:	K. C. Rajanna
Department, University & Country	Department of Chemistry, Osmania University, Hyderabad – 500007 (Telangana State), India