



SDI Review Form 1.6

Journal Name:	Chemical Science International Journal
Manuscript Number:	Ms_CSIJ_50754
Title of the Manuscript:	Cationic photopolymerization by Polymeric Triphenyl Phosphonium Salts
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. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)

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)
Compulsory REVISION comments	In general the paper reports on the development of the Phenacyl triphenylphosphonium and p-nitrobenzyl triphenylphosphonium polymer bound salts with SbF ₆ ⁻ counter ions for the cationic photopolymerization of epoxide monomers such as cyclohexene oxide and vinyl monomers such as N-vinyl carbazole and p-methyl styrene. The paper can be considered to be accepted with minor correction .	Reviewer's comment is considered all. Sure they are important and contribute to the quality improvement of the manuscript. Thanks.
Minor REVISION comments	<p>Abstract: Please provide the justification on synthesis process of Phenacyl triphenylphosphonium and p-nitrobenzyl triphenylphosphonium polymer bound salts with SbF₆⁻ counter ions Please provide the synthesis methodology of this compound Please provide some significant results on characterization of this compound</p> <p>Introduction Please provide some literature supported with current references on the following topics (i) Application of Soluble polymeric phosphonium salts as photoinitiator in different type of synthesis process (ii) photodecomposition of phenacyl triphenyl phosphonium for initiating of different type of polymeric materials</p> <p>Results and discussion Please provide details and technical discussion supported with current references on the following topics: (i) Photopolymerization of selected monomers by salts 2 and 3 (ii) Photolysis of salt 2 and 3 (iii) Reactions of (Polystyryl) diphenyl phosphonium salts with trans stilbene oxide (4).</p>	<p>Abstract: In early work as mentioned in the text we work with nonpolymeric Phenacyl triphenylphosphonium and p-nitrobenzyl triphenylphosphonium salts and compared the effect of onium salt structure and the counter ion (X).following the concept and advantages of heterogenization of the homogeneous catalysts we prepare the polymeric phosphonium salts reported here. The selection of the counter ion (X-) is based on our early work and experience with onium salts and polymerization reactions weither you working with vinyl or epoxide monomers.</p> <p>i. The synthesis methodology of these compound is reported on our early publications. Reactions follows simple organic chemistry between phenacylbromide and triphenylphosphine, or 4-nitrobenzyl bromide and triphenylphosphine. Exchange of the counter ion from Br- to SbF₆⁻ an be easily done according to several reports in the literature.</p> <p>ii. We reported on the formation of the phosphonium (onium) yield P=C or As=C photochemaly and the release of HX (HSbF₆) super acid can initiate cationic polymerization of selected vinyl and epoxide monomers. Another strategy for yield formation is reaction of onium salt with strong base, both strategies were followed and reported.</p> <p>Results and discussion i. Reference to support photopolymerization of selected monomers by salts 2 and 3 are added.</p>



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		ii. References to support photolysis of salt 2 and 3 are added. iii. Technical discussion with available references on the reaction of trans-stilbene oxides with onium salts is added.
<u>Optional/General</u> comments		

PART 2:

	Reviewer's comment	Author's comment <i>(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)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	