

## Review Form 1.7

Journal Name:	Asian Journal of Research and Reviews in Physics
Manuscript Number:	Ms_AJR2P_96364
Title of the Manuscript:	Ab-initio quantum chemistry through computer algebra
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:

(<https://www.journalajr2p.com/index.php/AJR2P/editorial-policy> )

### 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)
<p><b>Compulsory</b> REVISION comments</p> <p>1. <b>Is the manuscript important for scientific community?</b> (Please write few sentences on this manuscript)</p> <p>2. <b>Is the title of the article suitable?</b> (If not please suggest an alternative title)</p> <p>3. <b>Is the abstract of the article comprehensive?</b></p> <p>4. <b>Are subsections and structure of the manuscript appropriate?</b></p> <p>5. <b>Do you think the manuscript is scientifically correct?</b></p> <p>6. <b>Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</b></p> <p><b>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</b></p>	<p>1. The manuscript's importance for the scientific community is unclear since it deals with computation work on the ion HeH<sup>+</sup> that the authors claim to be somewhat original. This issue is a common problem in computational quantum chemistry that has been exhaustively studied in the last 50 years or more. See for example the papers: J. Chem. Phys. <b>4</b>, 353 (1936), Int. J. Quant. Chem. <b>4</b>: 431-50(Jul 1970), Mon. Not. R. Astron. Soc. <b>357</b>, 471–477 (2005), A&amp;A <b>529</b>, A140 (2011), J. Phys. B: At. Mol. Opt. Phys. <b>53</b> (2020) 174001 (7pp), Chemical Physics <b>539</b> (2020) 110927, Frontiers in Chemistry, June 2021   Volume 9   Article 679750.</p> <p>However, since lack of novelty is not a criterion for refusing a manuscript, I have no option but to recommend the publication of the present manuscript.</p> <p>2. The title seems to be suitable for what is described in the manuscript.</p> <p>3. The abstract should be shortened, cutting the superfluous parts highlighted in yellow in the manuscript.</p> <p>4. The major parts of the manuscript text consist in reproducing lines and lines of programming code, which are clearly superfluous and should be eliminated or compacted.</p> <p>5. The manuscript does not show the robustness of results which are exhibited in the papers above cited so I suggest some improvement of it should be done.</p> <p>6. The references are in great part concerned with algebraic computational methods, for which the authors seem to be extremely in love – they come to recommend the reader to try it by himself as if they have rediscovered the wheel! I suggest some genuine physical works, like that referred to above or many others existing in the literature, should be incorporated into the manuscript's references.</p>	
<p><b>Minor</b> REVISION comments</p> <p>1. <b>Is language/English quality of the article suitable for scholarly communications?</b></p>	<p>The quality of the English written is suitable for a scholarly communication.</p>	
<p><b>Optional/General</b> comments</p>		

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**PART 2:**

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

**Reviewer Details:**

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