Review Form 1.7

Journal Name:	**Chemical Science International Journal**
Manuscript Number:	**Ms_CSIJ_108851**
Title of the Manuscript:	**AN IDEAL GAS INDEED DOES WORK in EXPANSION INTO VACUUM**
Type of the Article	**Short communications**

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 **1. Is the manuscript important for scientific community?** (Please write few sentences on this manuscript) **2. Is the title of the article suitable?** (If not please suggest an alternative title) **3. Is the abstract of the article comprehensive?** **4. Are subsections and structure of the manuscript appropriate?** **5. Do you think the manuscript is scientifically correct?** **6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.** **(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)**	**1. No, the manuscript is not important for scientific community. Unfortunately, it contains big errors that can mislead the readers, especially the students.** **2. Yes, the title of the article is suitable.** **3. Yes, the abstract of the article is comprehensive.** **4. Yes, the subsections and structure of manuscript are appropriate.** **5. No, the manuscript is not scientifically correct because it contains big errors that can mislead the readers, especially the students:** - **the equation (2) is valid only when a gas expands in a quasistatic process. Unfortunately, the author of this manuscript wrongly applies this equation** - **the equations (3) and (4) are completely wrong. They are valid only for adiabatic isobaric expansion of gases. If they are valid, one infers that P2=P1 but "P2 above atmospheric pressure P1" (page 2)** - **using these wrong equations, at the end of Theory sections, the author obtains C_A=3.6R and C_P=2.6R. Below the equation (4), the author states "In [8] it was shown that $C_A = C_V$" (page 2). Therefore, the heat ratio $\gamma=C_P/C_V$=2.6/3.6<1. However, the heat ratio is always bigger than 1 (1.4 for air).** **6. The references are sufficient and recent.**	
Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	The language/English quality of the article is suitable for scholarly communications.	
Optional/General comments		

PART 2:

	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)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

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Reviewer Details:

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