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Manuscript Number:	Ms_AJOCS_35484
Title of the Manuscript:	Optical absorbence and band structure of molecular hydrogen in different phases
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)
Compulsory REVISION comments		
Minor REVISION comments	<ol style="list-style-type: none"> 1- Is what you calculated the transition pressures for the five phase or you took them to literatures 2- Is what you have assured that solid hydrogen under great pressure keeps their properties (optics, thermodynamics, transport ...) 3- You have cited five phases for solid hydrogen. Are these phases are phases are observed excrementally or are crystallographic phases. 4- I think with the use of approaches as DFT + U or mbj or hybrid can be 4 and 5 phases are semiconductor nature 5- As is known in the physics of condensed matter the study of a material under pressure is related to the temperatures. More than solid hydrogen can be considered a superaconductor. Therefore you are obliged to provide a study with temperature 	<p>I thank the reviewer for his comments. My responses are as follows-</p> <ol style="list-style-type: none"> 1. transition pressures are taken from literatures (ref 13, 15 and 16 of the manuscript) 2. Properties may change or may not change. In my article it is assumed that under great pressure they keeps their properties. 3. These phases are observed experimentally. 4. This quarry is not clear to me. Anyway, phase 4 and 5 are conducting as indirect band gap is 0 or less, though direct band gap is greater than 0 for both the gases. 5. All these studies are done at 300K. It is mentioned in the revised manuscript.
Optional/General comments		