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REVIEWER'S REPORT

Manuscript No.: IJAR-59790

Title: Determination of the Structural, Electronic, and Optical Properties of the $CH_3NH_3SiCl_3$ Perovskite Using an Ab Initio Method

Recommendation:
Accept as it is □□□□..
Accept after minor revision□√□□
Accept after major revision □□□□□
Do not accept (*Reasons below*) □□□

Rating	Excel.	Good	Fair	Poor
Originality		√		
Techn. Quality		√		
Clarity		√		
Significance		√		

Reviewer ID: JP085

Reviewer□s Comment for Publication.
The article investigates the structural, electronic, and optical properties of $CH_3NH_3SiCl_3$ perovskite using Density Functional Theory (DFT). The authors report a lattice constant of 5.72 Å and a direct band gap of 2.509 eV. The study suggests possible applications in photovoltaic and optoelectronic devices

Strength:

1. The research topic is interesting and relevant to materials science.
2. The study explores structural, electronic, and optical properties.
3. DFT calculations are used to investigate the material.
4. Different optical parameters are discussed.
5. The article includes graphs, equations, and references.
6. The findings may provide a starting point for further research

Weakness:

1. The computational methodology is not explained in sufficient detail.
2. Important information about pseudopotentials and the selected atomic configurations is missing.
3. The authors should provide more details about the structural stability of the proposed cubic structure.
4. The study does not clearly explain why the Pm-3m cubic structure is suitable for this compound.
5. The band gap calculated using PBE-GGA may be underestimated; this limitation should be discussed.
6. Spin–orbit coupling and its possible effect on electronic properties are not adequately discussed.
7. Some equations, symbols, and mathematical expressions are not properly formatted.

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Overall assessment:
The article presents an interesting theoretical study of a new silicon-based perovskite material. However, the computational details, structural stability, interpretation of optical properties, and scientific conclusions require further clarification. Several inconsistencies and presentation errors also need correction.

Recommendation: Manuscript accepted for publication after minor revision.