# Review of: "Correlating exciton coherence length, localization, and its optical lineshape"

Jianliang Jiang[1]

1 Beijing Institute of Technology

Potential competing interests: No potential competing interests to declare.

This work is interesting to build a unified model coupling between the lattice and the exciton under a non-perturbative and self-consistent framework. However, several poor and illogical discriptions impair its acceptability.

1. reorganization energy $\mu$, reorganization energy $E_{reorg}$(Eqa. 19) are inconsistent.
2. to deduce eqa. 20, what are the two expressions?
3. What is the $T^*$? the critical temperature?
4. page 3, right, line 5. It is not a correct sentence in the grammar and logical senses.
5. subsection C. The deduction skips much nececcary details.
6. section III. Inequation $T \ll \hbar\mu/k$ aren't related to necessary information in context.
7. phrase “finite-temperature” is not logically resonable: actually, the temprature must be finite while lattice exists. “finite-temperature” could be replaced with “temprature-related”.
8. section I, line 1. two “the”.
9. “line width” , “line-width” and “linewidth” are inconsistent.
10. page 3, left, line 1. what is the meaning with “black A”?
11. two lines above section III. The sentence seems  to have some grammar problem, and disturbs the physical meaning.