

Dear Editor and Reviewers:

Thanks for your letter dated May 9th as well as the reviewers' reports on our manuscript (No: [nanomaterials-2399385](#)). We sincerely appreciate the insightful criticism that reviewers provided on our manuscript. The entire manuscript has undergone careful review in response to your comments and recommendations. The revision details are listed below:

Response to Reviewer #2:

Comment 1: I suggest that the authors divide the Heterostructure construction section into two or three parts based on the morphology of the composites.

Response: Thanks for your suggestion. We have divided the Heterostructure construction section into three parts (semiconductor-WO_x, WO_x-C, metal-WO_x) according to the components. Please see page 14 of the revised manuscript for the details.

Comment 2: Please provide two or three more mechanism figures and explanations.

Response: Based on your suggestion, we have provided the corresponding mechanism figures and explanations. Please see the Fig. 3 and Page 5 of the revised manuscript for the details.

Comment 3: Once these corrections are made, the manuscript can be accepted.

Response: Thank you very much.

Comment 4: Please discuss the importance of this review at the end of the introduction.

Response: Based on your suggestion, we discussed the importance of this review in the introduction of the revised manuscript. Please see page 3 of the revised manuscript for the details.

We hope this version is suitable for *Nanomaterials*. Please feel free to let us know if you have any inquiries.

Thank you again for these nice suggestions.

With best regards,

Prof. Rongming Wang