Is this paper in the top 5% of manuscripts in the field?

NO

Is this paper in the top 15% of manuscripts in the field?

Yes

If this paper is not in the top 15% of manuscripts in the field:

NO

Is it appealing to a broad audience?

Yes

Does the manuscript give a complete description of the procedures that could be reproduced by others in the field?

Yes

Are the conclusions adequately supported by the data?

Yes

Are the literature references appropriate and correct?

Yes

Is the manuscript a comprehensive article/review?

Yes

Recommendation: Publish after minor revisions

Comments:

The authors reported a useful method to flexibly microprocess multilayer MoS2 flakes through femtosecond laser pulse direct writing, which can directly fabricate regular MoS2 nanoribbon arrays with ribbon widths and arbitrarily pattern MoS2 flakes to form micro/nanostructures. The chemical change of MoS2 were also studied, indicating oxygen molecules are chemically and physically bonded to laser-processed MoS2, attributed to roughness defect-sites and edges of micro/nanostructures. They conducted the electrical tests of the field effect transistor fabricated from prepared MoS2 nanoribbon arrays, and the output and transfer characteristics exhibited strong rectification. The method for maskless micro/nanopatterning of MoS2 flakes and research on the chemical and electrical change of laser-processed MoS2 were significant and interesting. The innovation of this work is clear and significant, and the manuscript is well organized. However, before possible publication, some of the listed points should be explained or revised for further improving the manuscript.

1. Authors demonstrated the advantage of femtosecond laser processing and compared it with CW laser processing. Please illustrate the mechanism of femtosecond laser processing or doing compared experiment to explain it.（有现成的）
2. Please explained the formation of MoS2 micro/nanostructures in this work through femtosecond laser pulse direct writing, for it was difficult to fabricate nanostructures through conventional direct writing due to diffraction limit of femtosecond laser.（理论解释，如果可以弄点公式计算; 解释不使用激光参数的原因，解释单层可否此处可补充实验）
3. In Figure 4, the authors claim stronger peak of nonvalent oxygen of O2/MoS2, on a Y-axis with a.u., this is not very convincing. What is the reference peak employed here to address relative changes? And also explain the absence of the strong and dominant peak assigned to divalent oxygen of Si–O bonds（参照以前复制一下，计算下具体数据，参照以前粗制一下）
4. Authors demonstrated that oxygen molecules are chemically and physically bonded to laser-processed MoS2, please elaborate the effect of adsorption of oxygen molecules on MoS2.(可引用文献、可PL实验、如果可以还可以计算)
5. The rectification phenomenon of electrical properties of MoS2 field effect transistor in this work is significant. Please explain why femtosecond laser processing/surface moderate modification can cause them. （厚度(有数据)减小开关比增大，激光载流子自陷，P型参杂）