Erratum: Pressure-induced yttrium oxides with unconventional stoichiometries and novel properties [Phys. Rev. Materials **5, 044802 (2021)]**Qiuping Yang, Jianyan Lin, Fei Li, Jing Zhang, Eva Zurek , and Guochun Yang

(Received 18 April 2021; published 4 May 2021)

DOI: [10.1103/PhysRevMaterials.5.059901](https://doi.org/10.1103/PhysRevMaterials.5.059901)

We found that there is redundant and inaccurate description of the oxygen motifs in the manuscript.

The corrected description of the oxygen motifs is given below.

1. In the Abstract it should read: “... the oxygenic motifs (e.g., O^{2-} , O_2^{2-} , and O_2^-) that are present in compounds have a substantial effect on their electronic structure and behavior.”

2. In the third paragraph of the Introduction it should read: “... the eighth element can assume a variety of motifs (e.g., O^{2-} , O_2^{2-} , O_2^- , and O_3^{2-}) within compounds, exhibiting different oxidation states (e.g., -2 , -1 , and -0.5), which can play a key role in its physical/chemical properties. Li_2O_2 with O_2^{2-} (peroxide) is insulating, LiO_2 comprising O_2^- (superoxide) is paramagnetic, whereas Li_3O_4 , containing both O_2^{2-} and O_2^- , exhibits intriguing half-metallic magnetism.”

3. In the Results and Discussion, bottom of page 4, it should read: “As mentioned above, the properties of oxides are closely related to the O motifs present in them (e.g., O^{2-} , O_2^- , and O_2^{2-} , or their combinations).”

4. In the Results and Discussion, first paragraph of *Electronic Properties*, it should read: “Inspired by the novel structures and presence of O^{2-} , O_2^{2-} , and O_2^- in these predicted Y-O compounds,” and “*Cmcm* YO_3 is metallic, with the PDOS at the Fermi level arising mainly from the contribution of O 2p in O_2^- [Fig. 3(d)], ...”

5. In the conclusions part it should read: “More interestingly, the oxygen forms evolve from O^{2-} , to the coexistence of O^{2-} and O_2^{2-} , and to O_2^- with increasing oxygen content in the stable Y-O compounds.”

It is noted that these corrections do not alter any of the conclusions.