

*Supplementary Information*

**Au clusters adsorption on the perfect and the defective MoS<sub>2</sub>  
monolayers: structural and electronic properties**

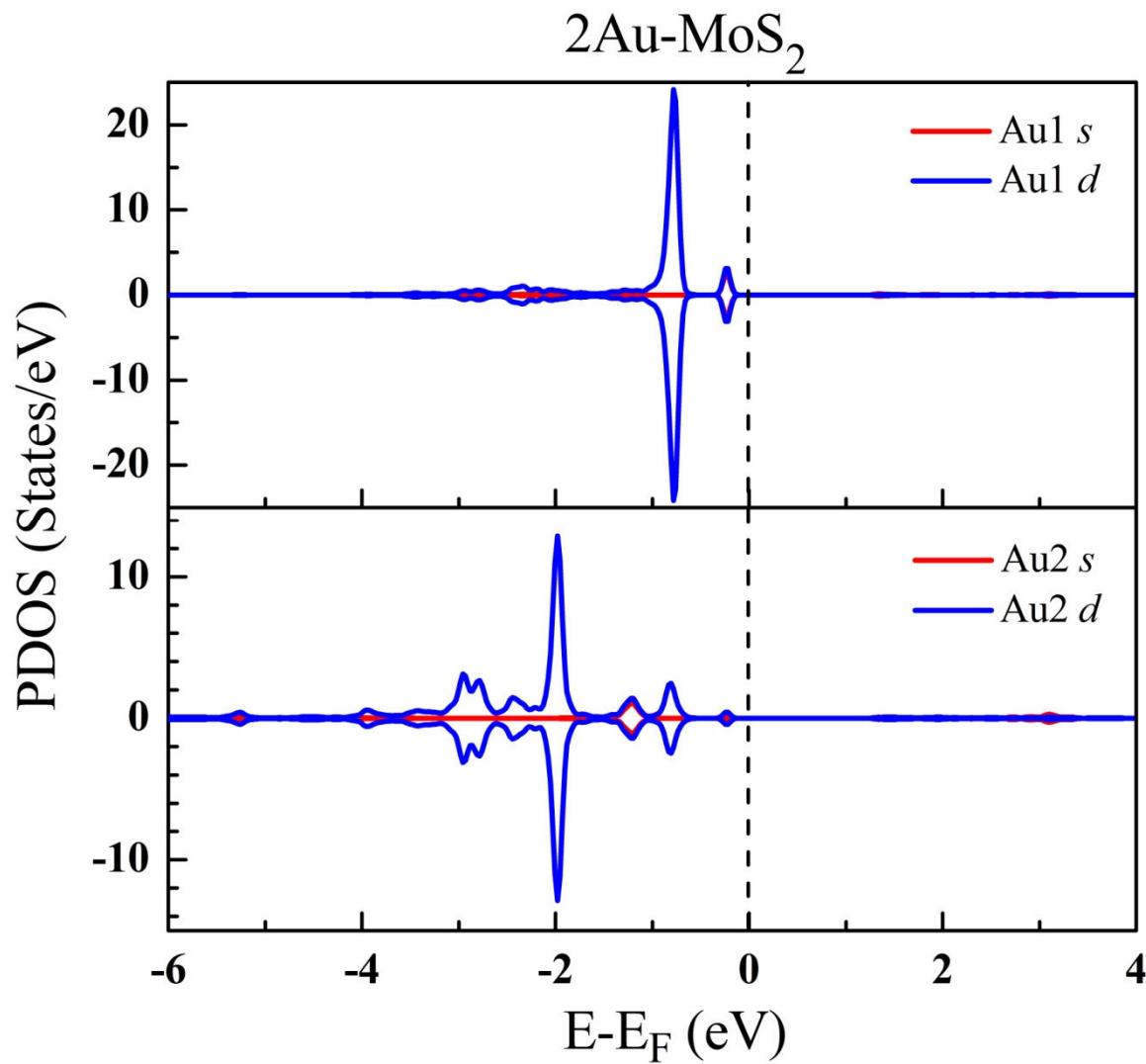
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Xiaohong Li<sup>1</sup>, and Dongwei Ma<sup>2,\*</sup>

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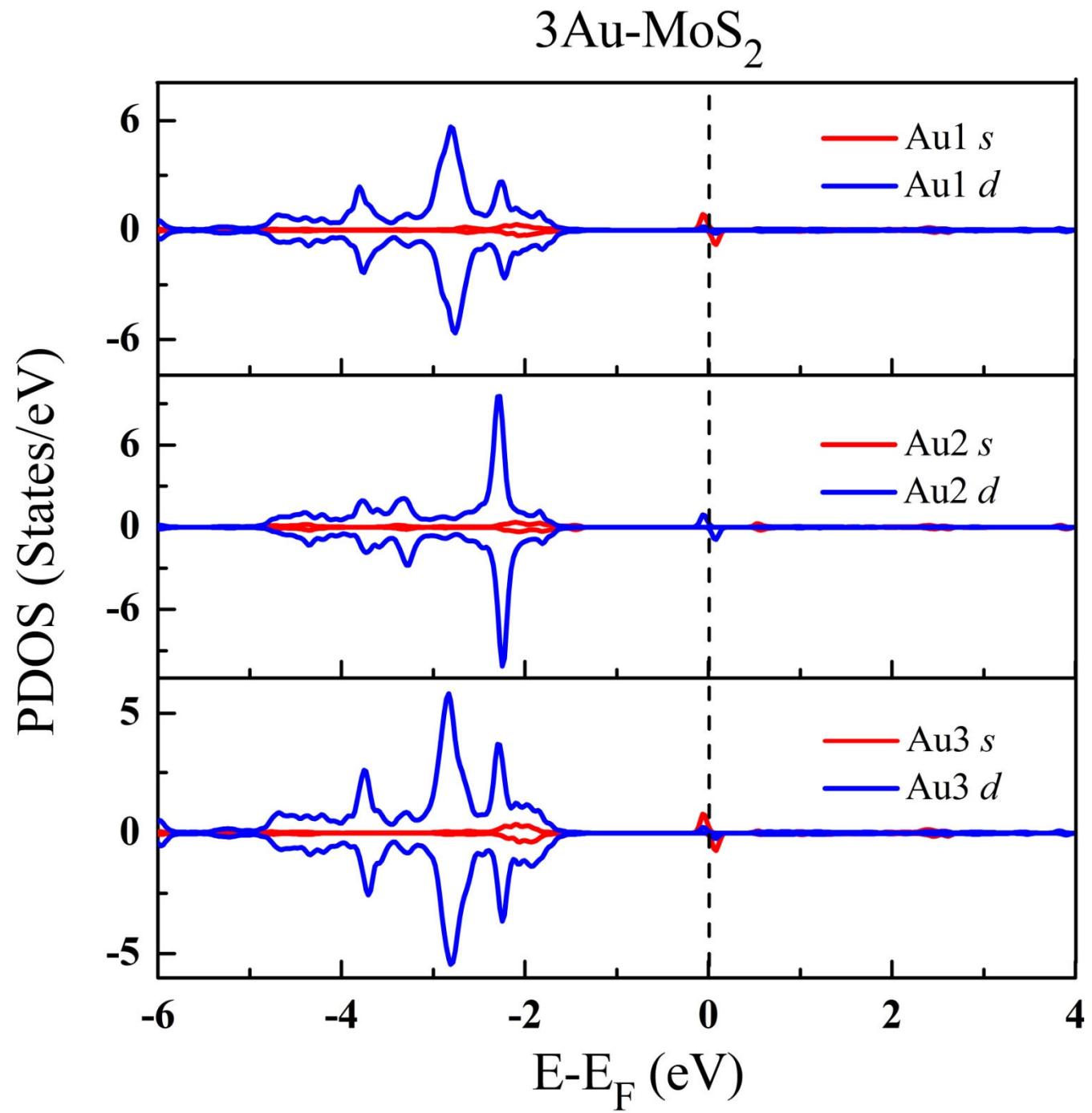
<sup>2</sup>School of Physics, Anyang Normal University, Anyang 455000, China

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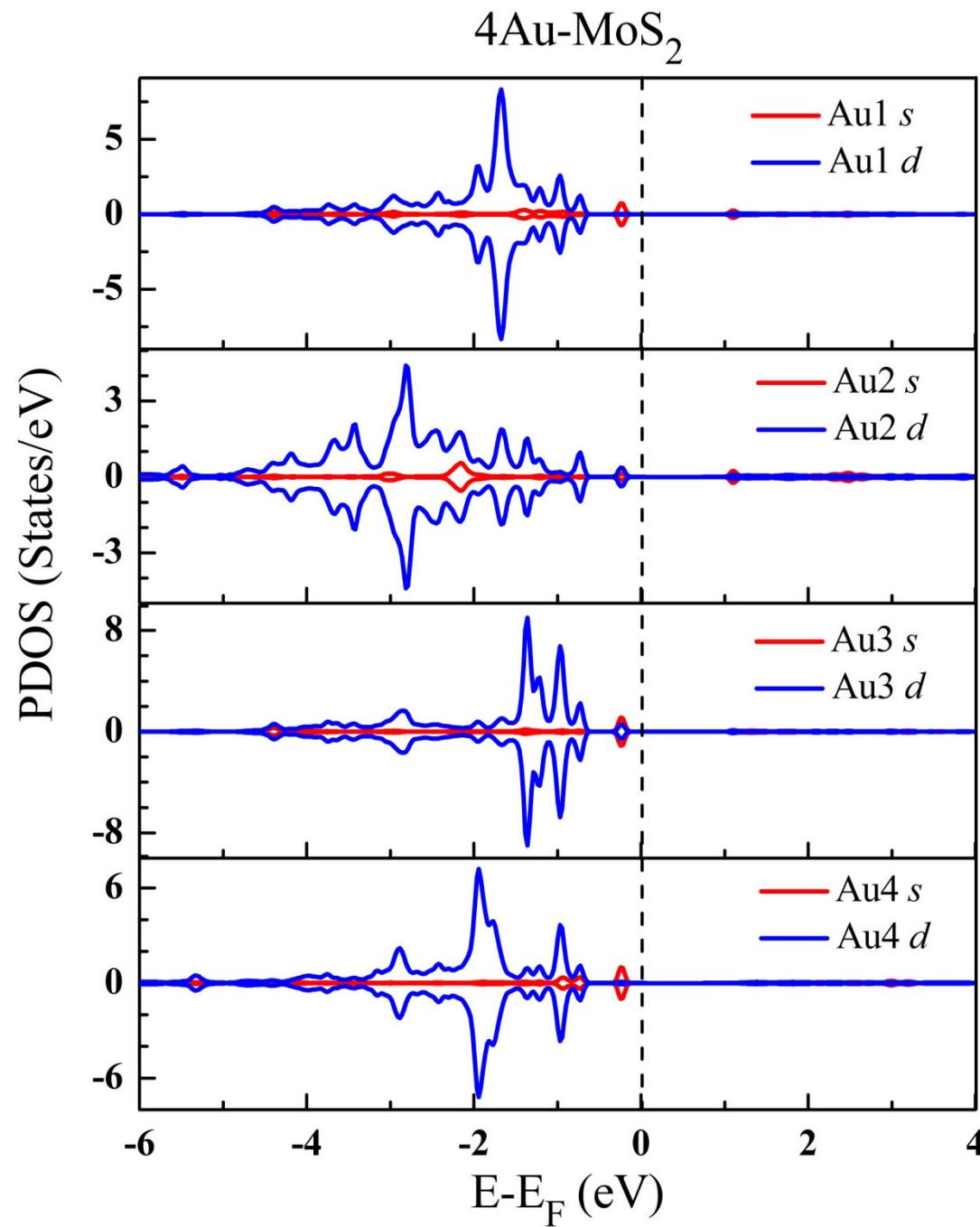
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**Fig. S1** The PDOSs of all Au atoms in 2Au-MoS<sub>2</sub> system.

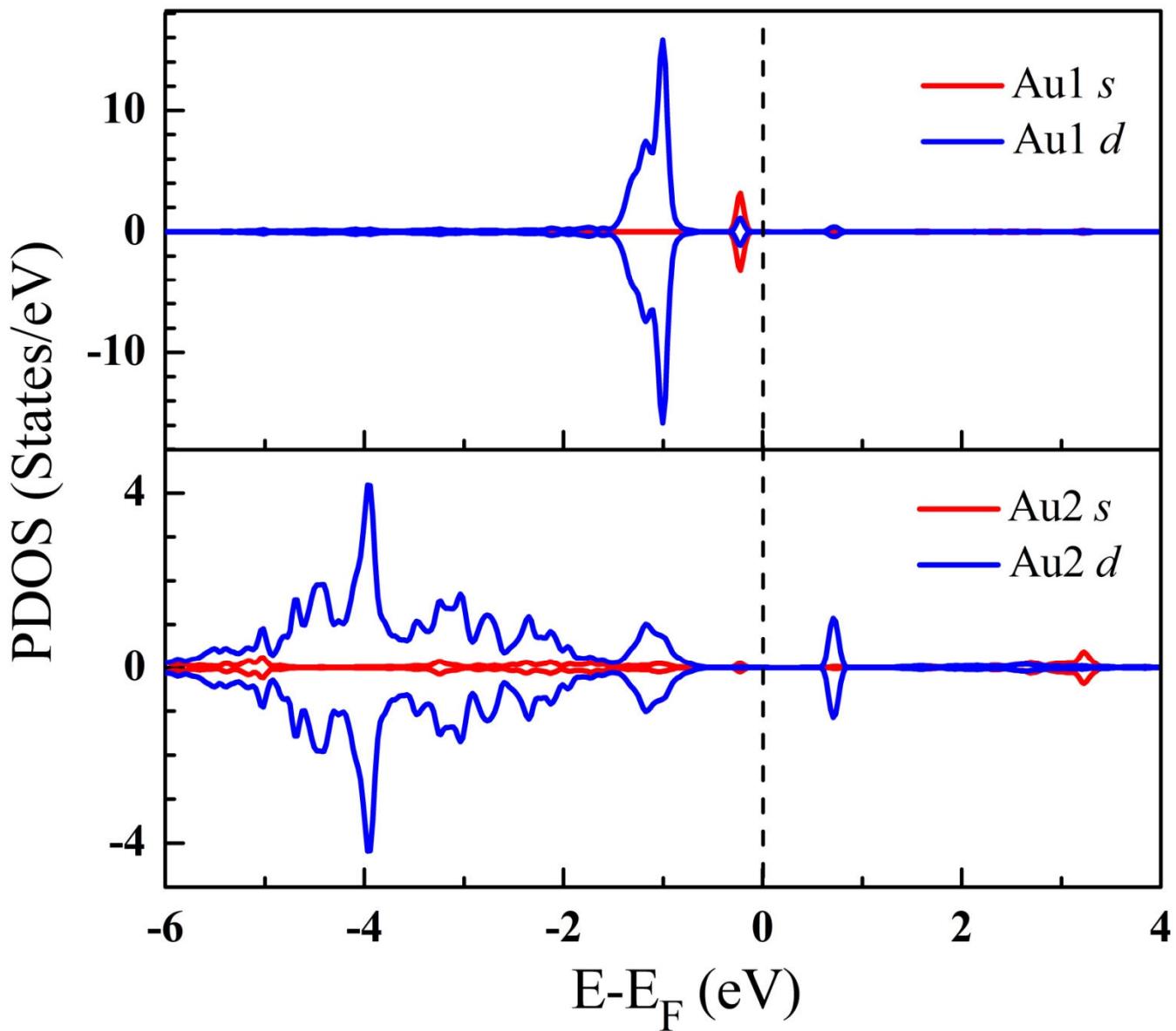


**Fig. S2** The PDOSs of all Au atoms in 3Au-MoS<sub>2</sub> system.



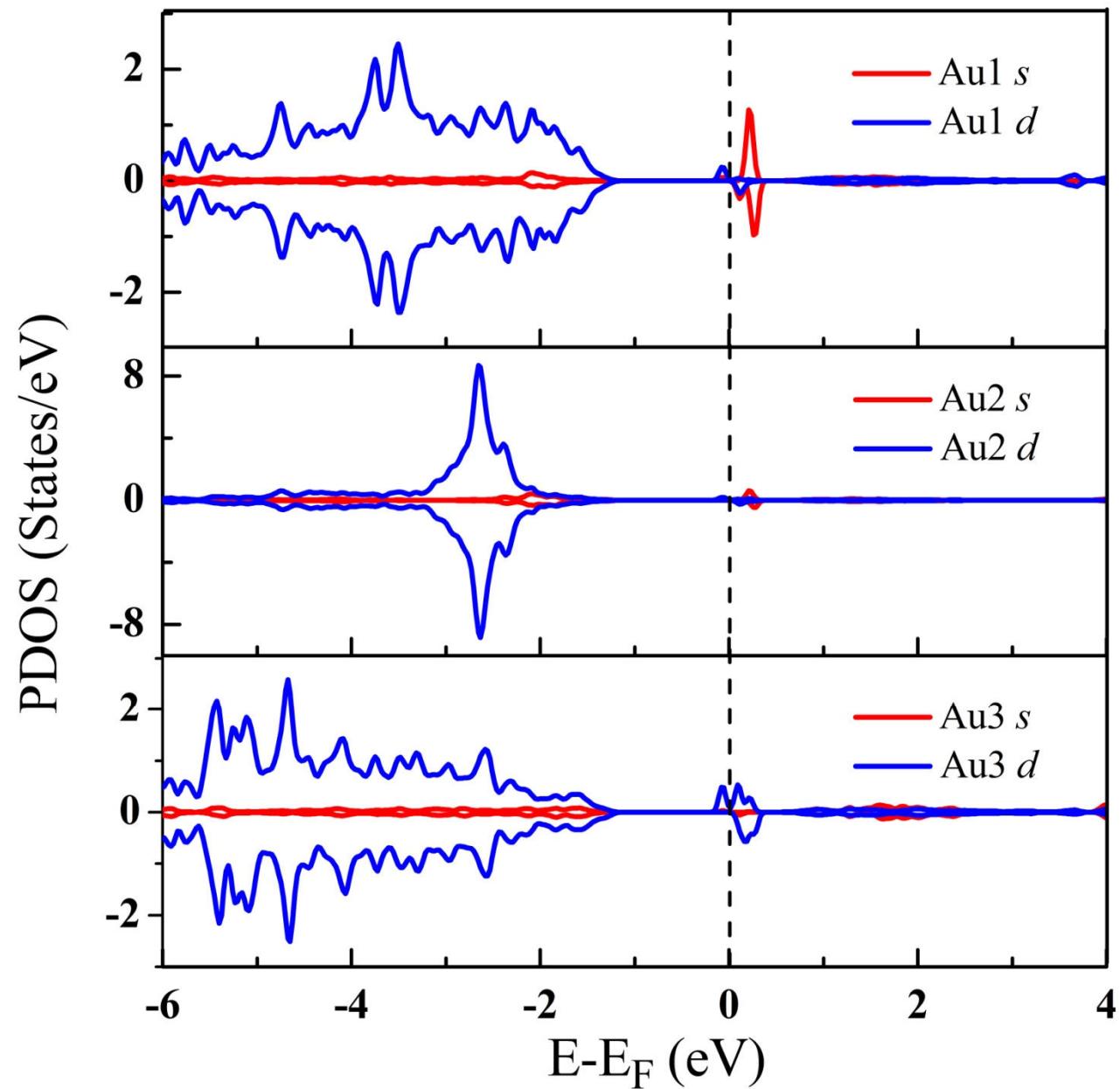
**Fig. S3** The PDOSs of all Au atoms in 4Au-MoS<sub>2</sub> system.

## 2Au-Sv

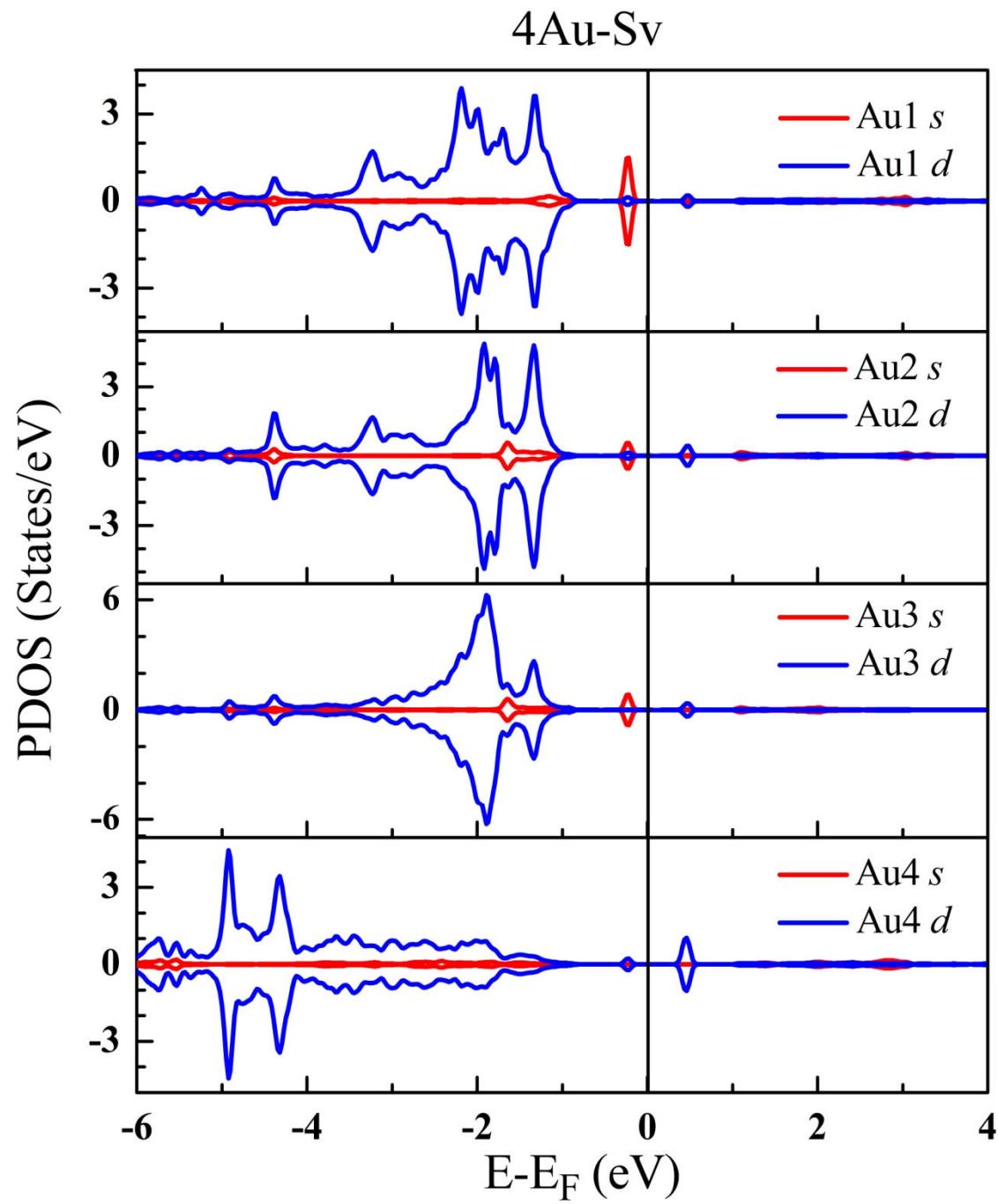


**Fig. S4** The PDOSs of all Au atoms in 2Au-Sv system.

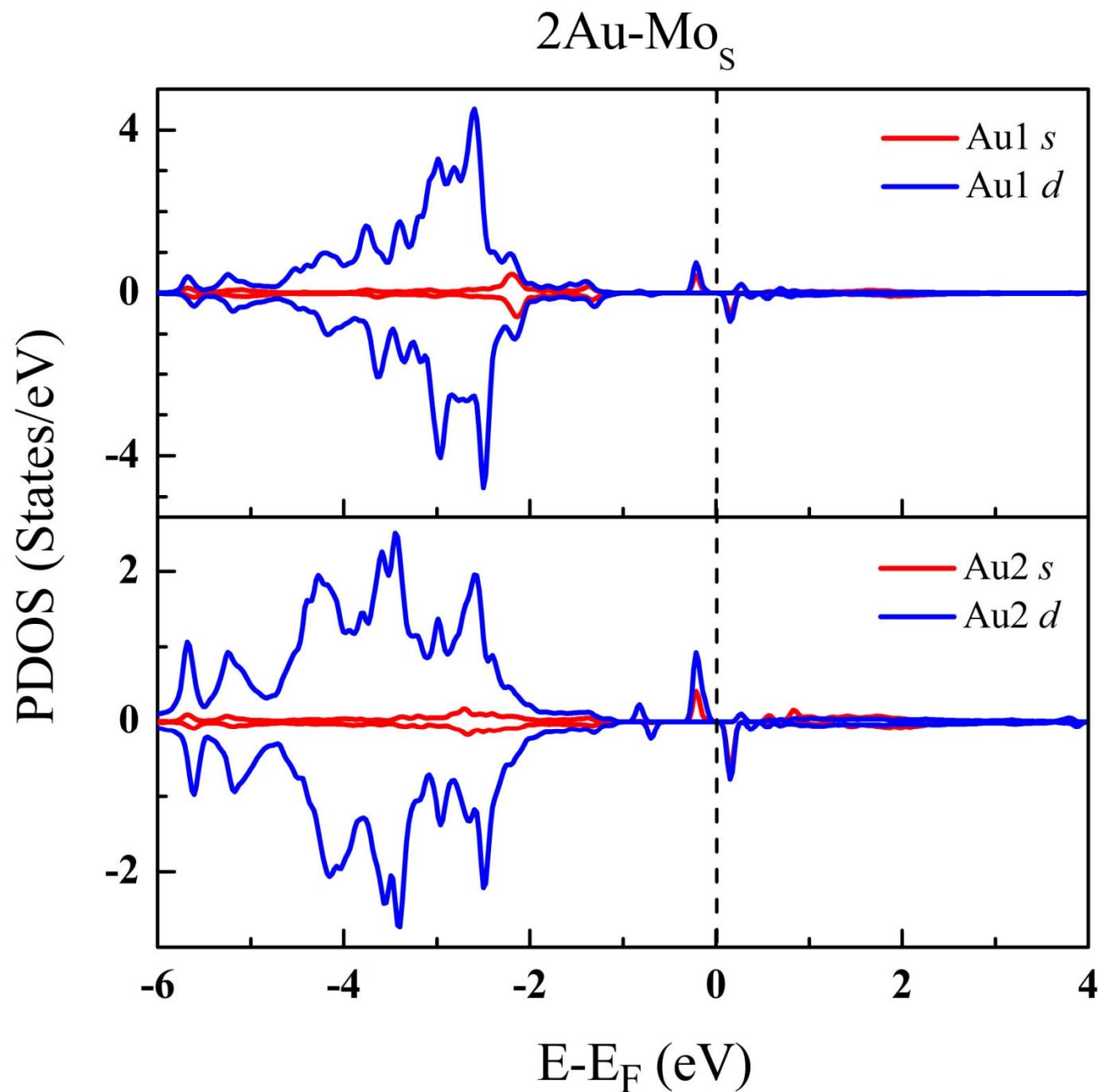
### 3Au-Sv



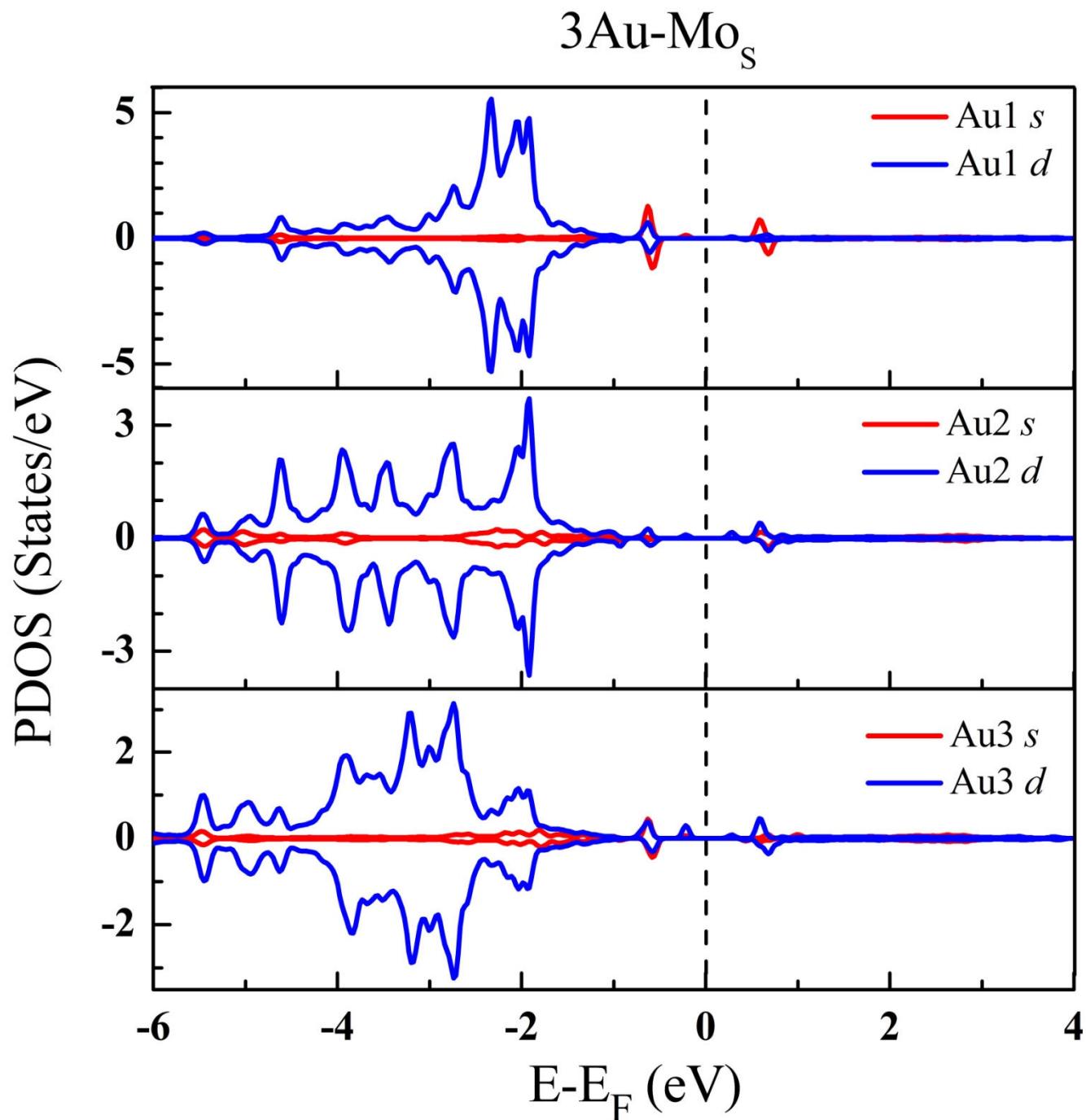
**Fig. S5** The PDOSs of all Au atoms in 3Au-Sv system.



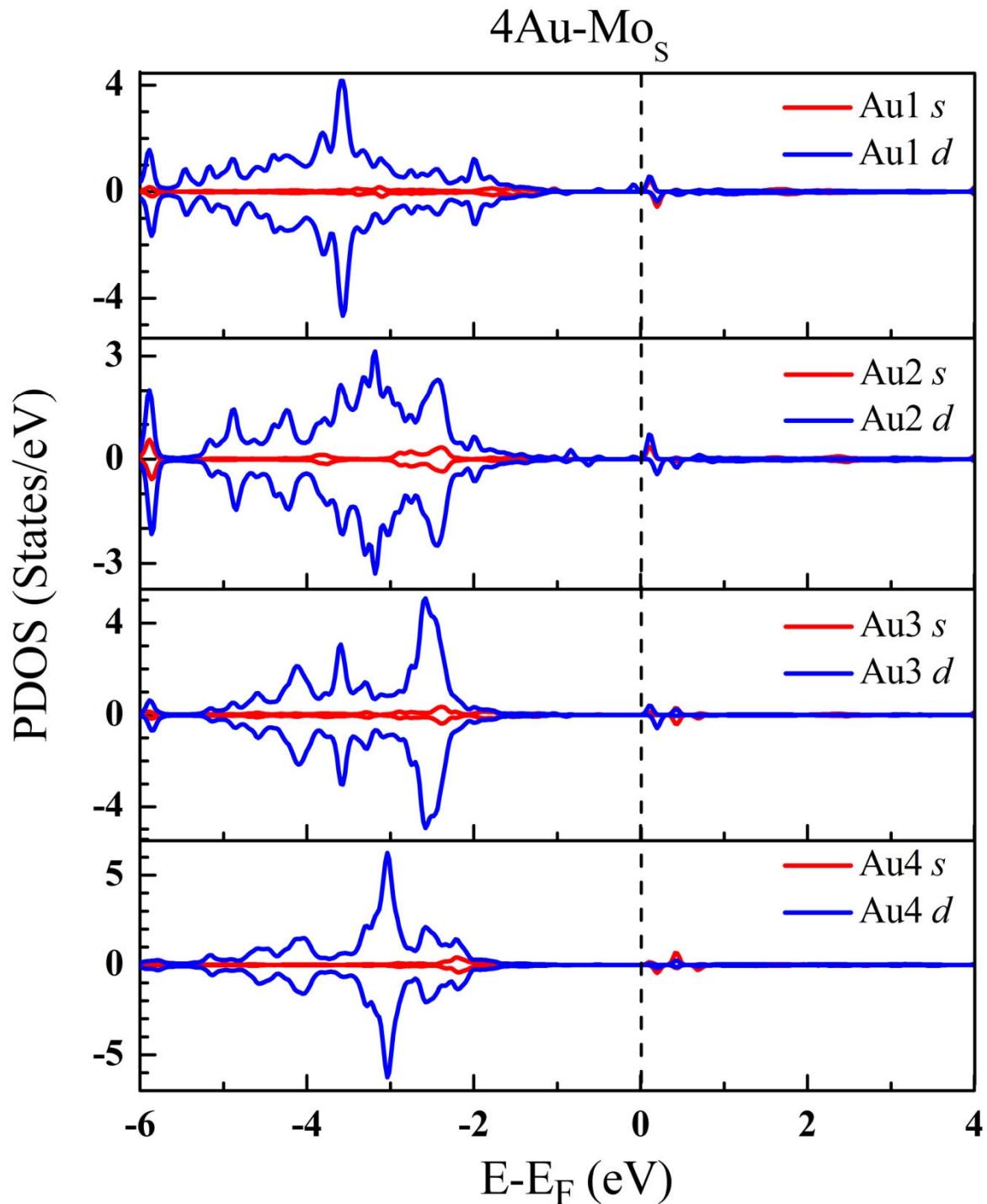
**Fig. S6** The PDOSs of all Au atoms in 4Au-Sv system.



**Fig. S7** The PDOSs of all Au atoms in 2Au-Mo<sub>S</sub> system.



**Fig. S8** The PDOSs of all Au atoms in 3Au-Mo<sub>S</sub> system.



**Fig. S9** The PDOSs of all Au atoms in 4Au-Mo<sub>S</sub> system.