

## Electronic Supplementary Information

### **Photoexcited Ag ejection from a low-temperature He cluster: A simulation study by nonadiabatic Ehrenfest ring-polymer molecular dynamics<sup>†</sup>**

Yusuke Seki, Toshiyuki Takayanagi\*

Department of Chemistry

Saitama University, Shimo-Okubo 255, Sakura-ku, Saitama City, Saitama 338-8570, JAPAN

Motoyuki Shiga

Center for Computational Science and E-Systems, Japan Atomic Energy Agency, 148-4,  
Kashiwanoha, Campus, 178-4 Wakashiba, Kashiwa, Chiba 277-0871, Japan

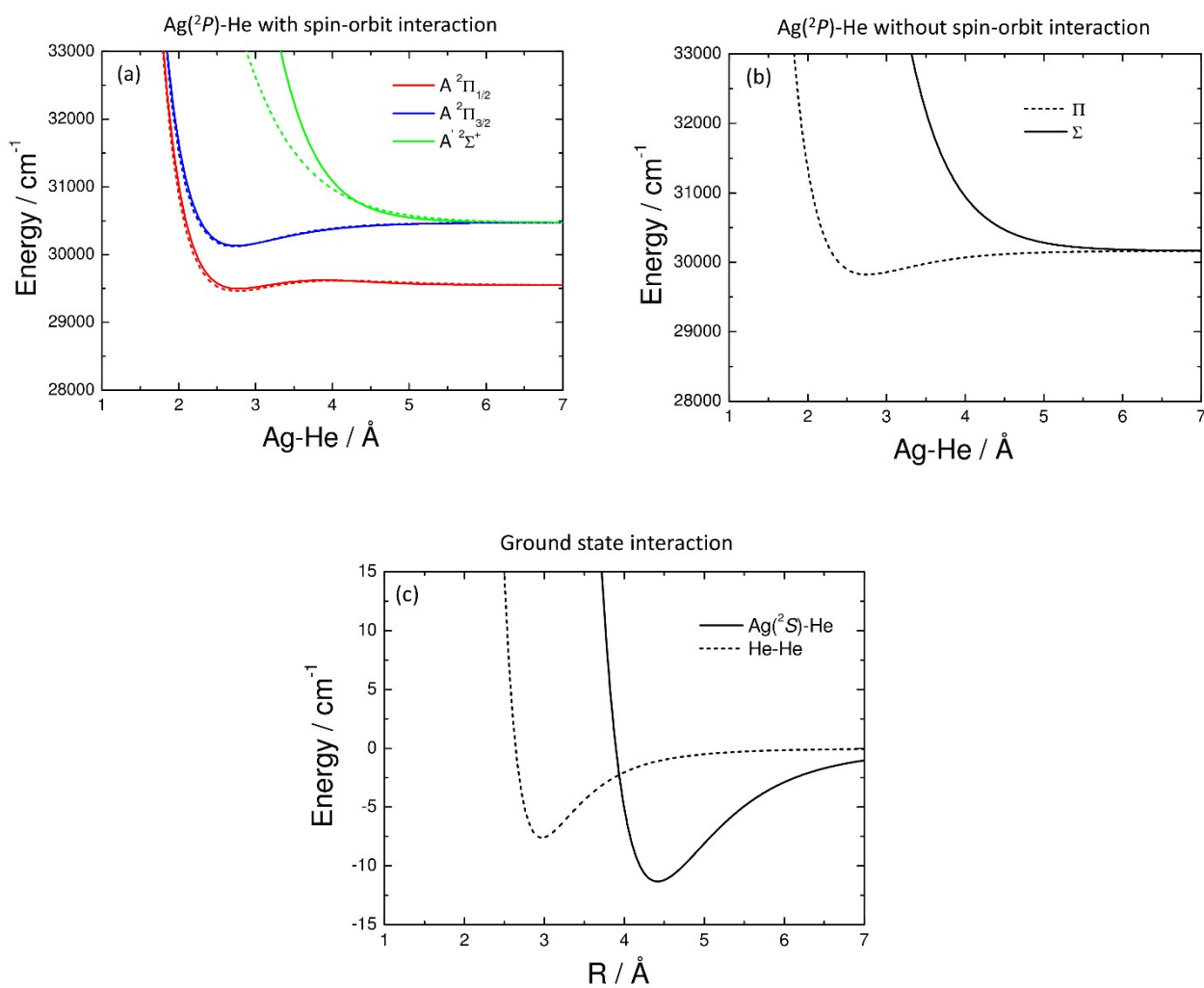


Fig. S1.

(a) and (b): Potential energy curves (solid lines) for the Ag(<sup>2</sup>P)–He (with and without spin-orbit interaction) used in this work. *Ab initio* electronic structure calculation results (dashed lines) taken from the paper of Jakbek and Takami (*Chem. Phys. Lett.*, **265** (1997) 653) are also shown to demonstrate the accuracy of the potential energy functions used in this work. (c): Potential energy curves for the Ag(<sup>2</sup>S)–He and He–He interactions.

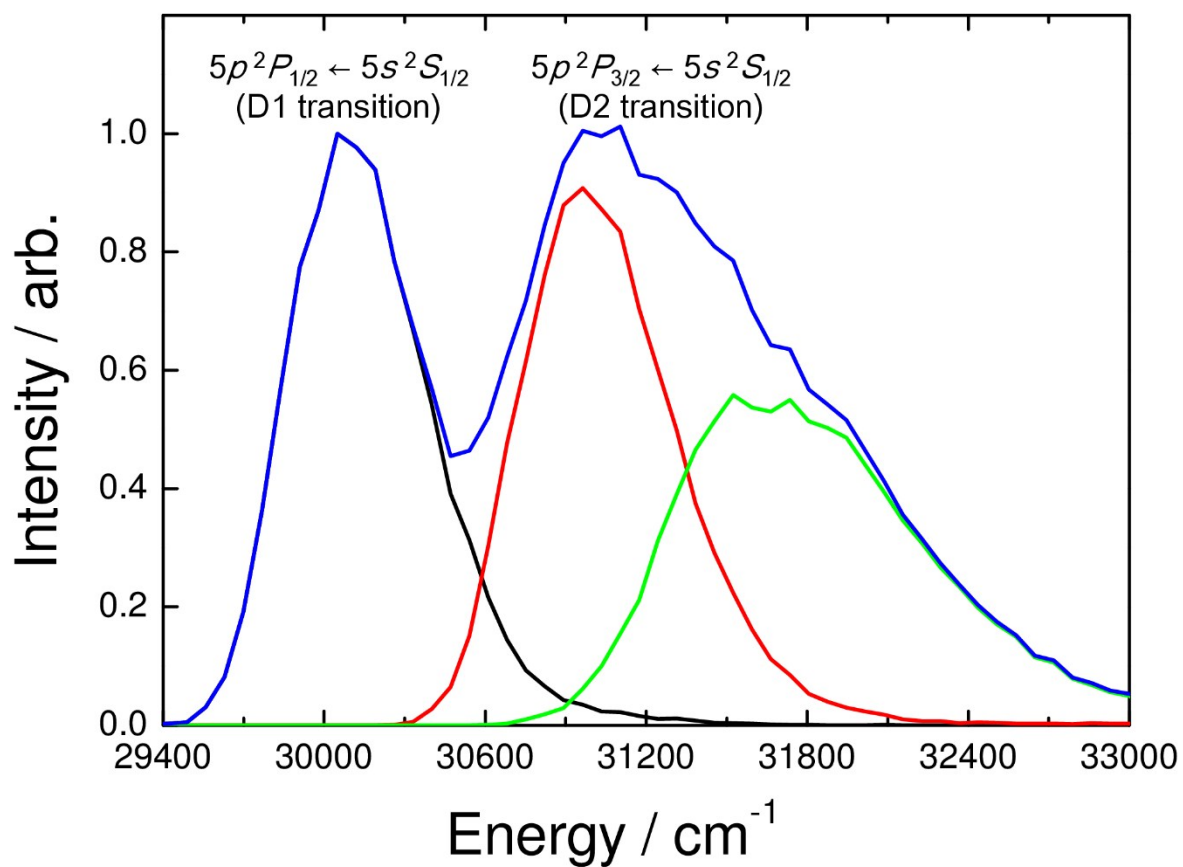


Fig. S2

Calculated total photoabsorption spectrum and decomposed spectra (contributions from the three adiabatic electronic excited states) for the AgHe<sub>500</sub> cluster, where atomic densities were calculated from the path-integral molecular dynamics simulations.