Supplementary Material for "Formation of metallic Ag on AgBr by femtosecond laser irradiation"

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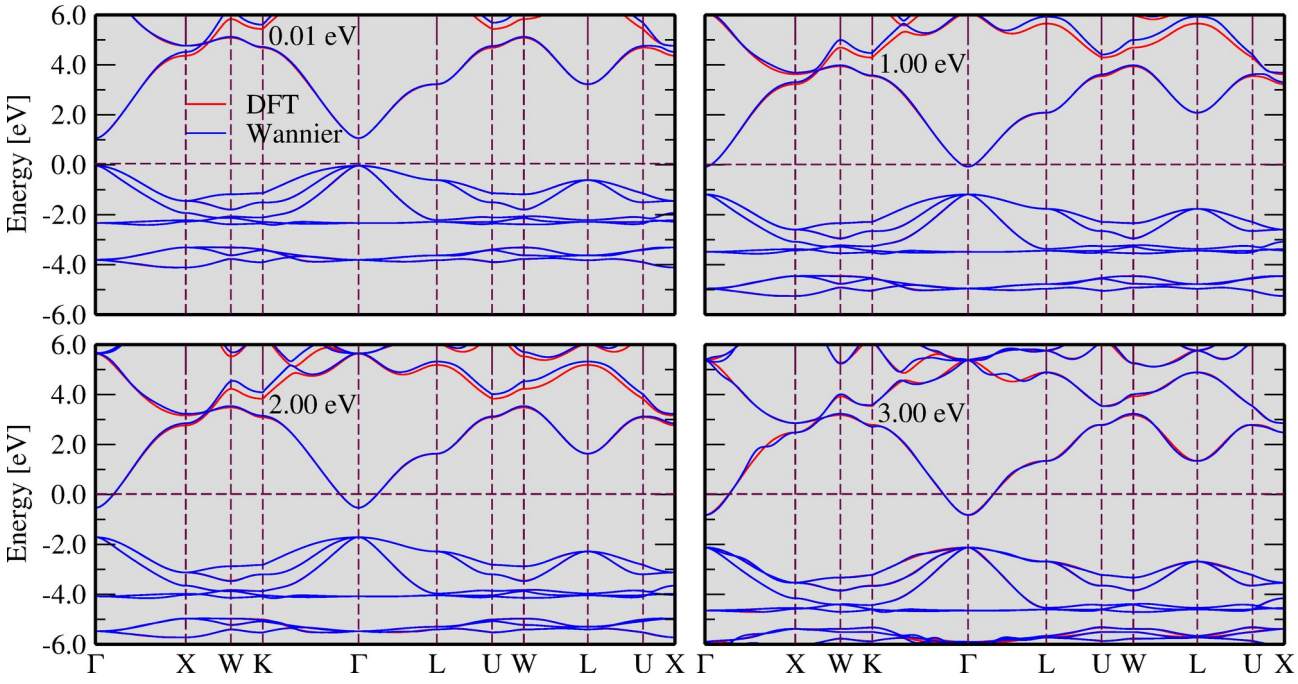

Figure S1. Calculated electronic band structure for AgBr as a function of the electronic temperature using finite-temperature density functional theory and Wannier interpolation.

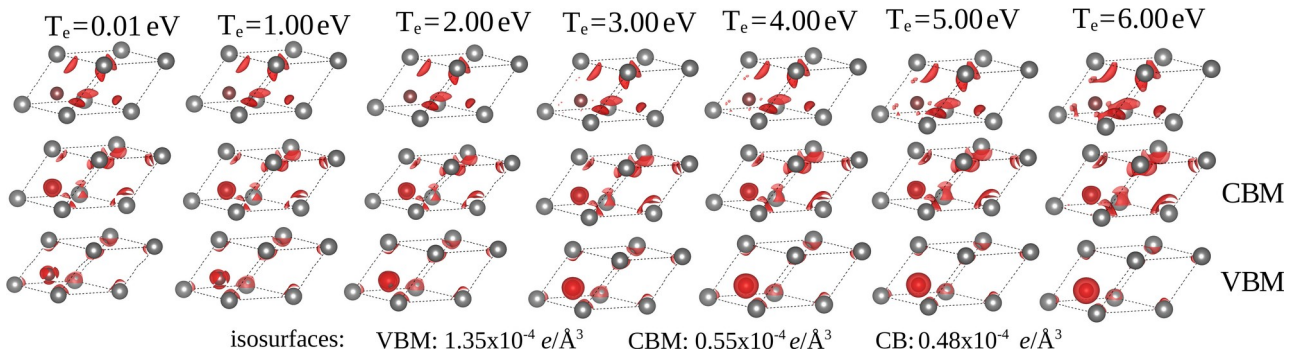

Figure S2. Calculated charge density for AgBr in the primitive unitcell for the valence band maximum (VBM), conduction band minimum (CBM) and conduction band (CB) as a function of the electronic temperature.

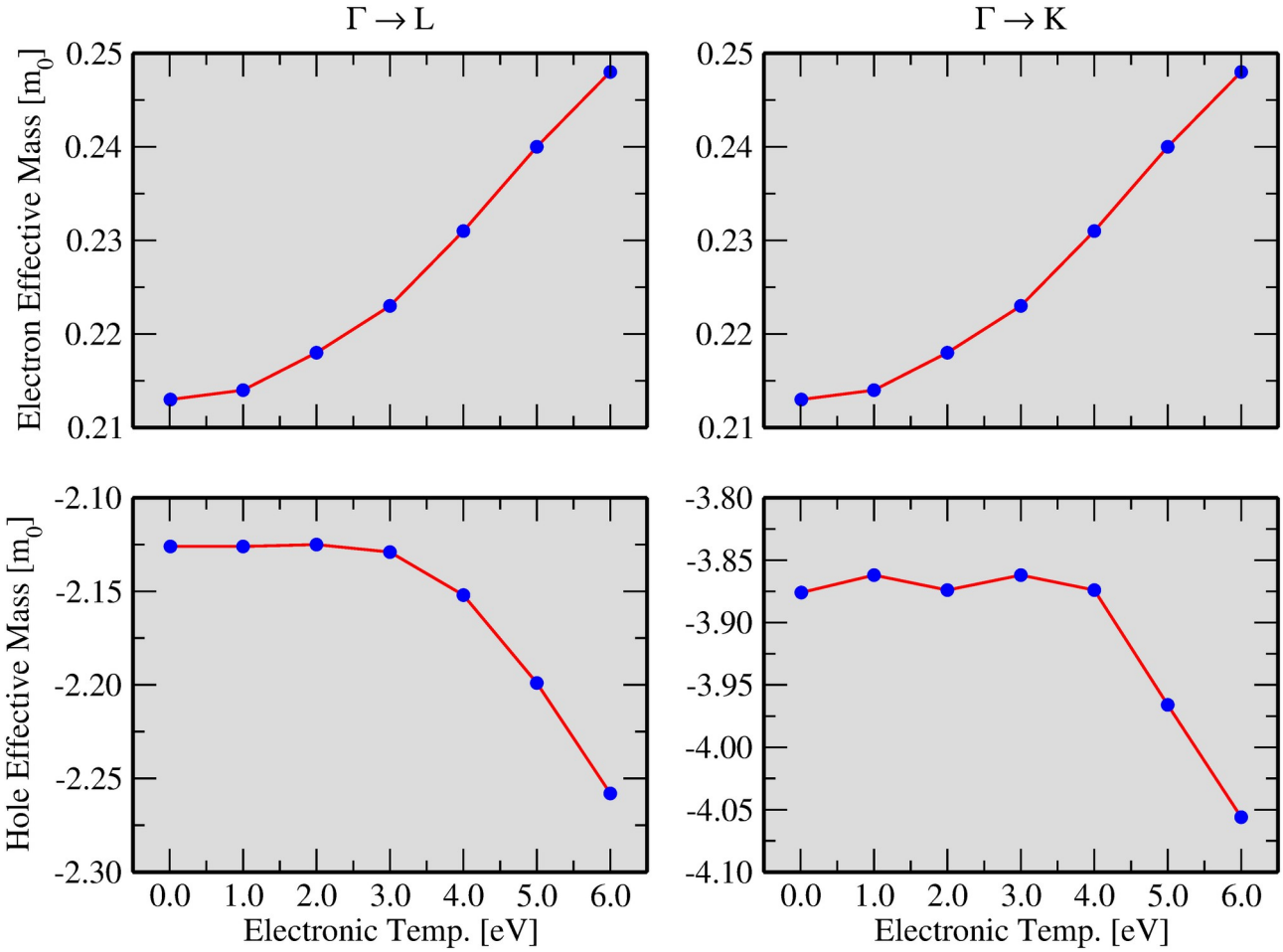

Figure S3. Electron and hole effective mass dependency of the Brillouin zone k-path used in the band structure calculations of Figure 1 and Figure S1.

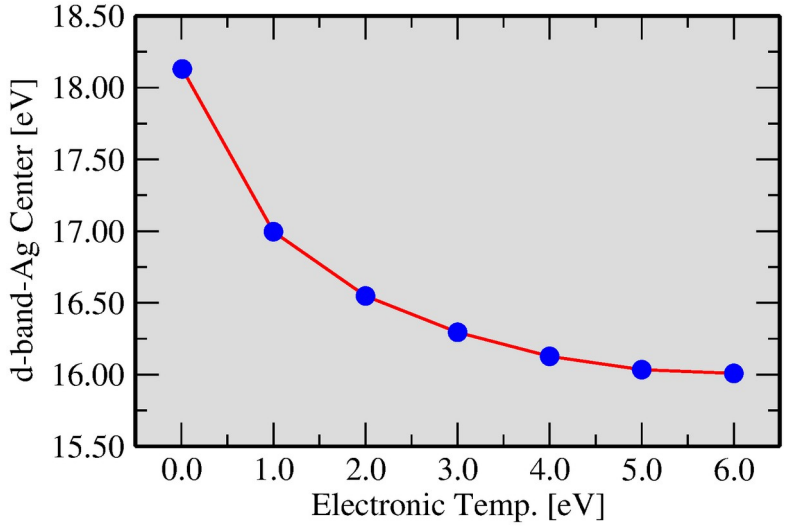

Figure S4. Finite temperature-density functional theory calculations for the d-band Ag center. The electronic excitation changes the d-Ag band center.

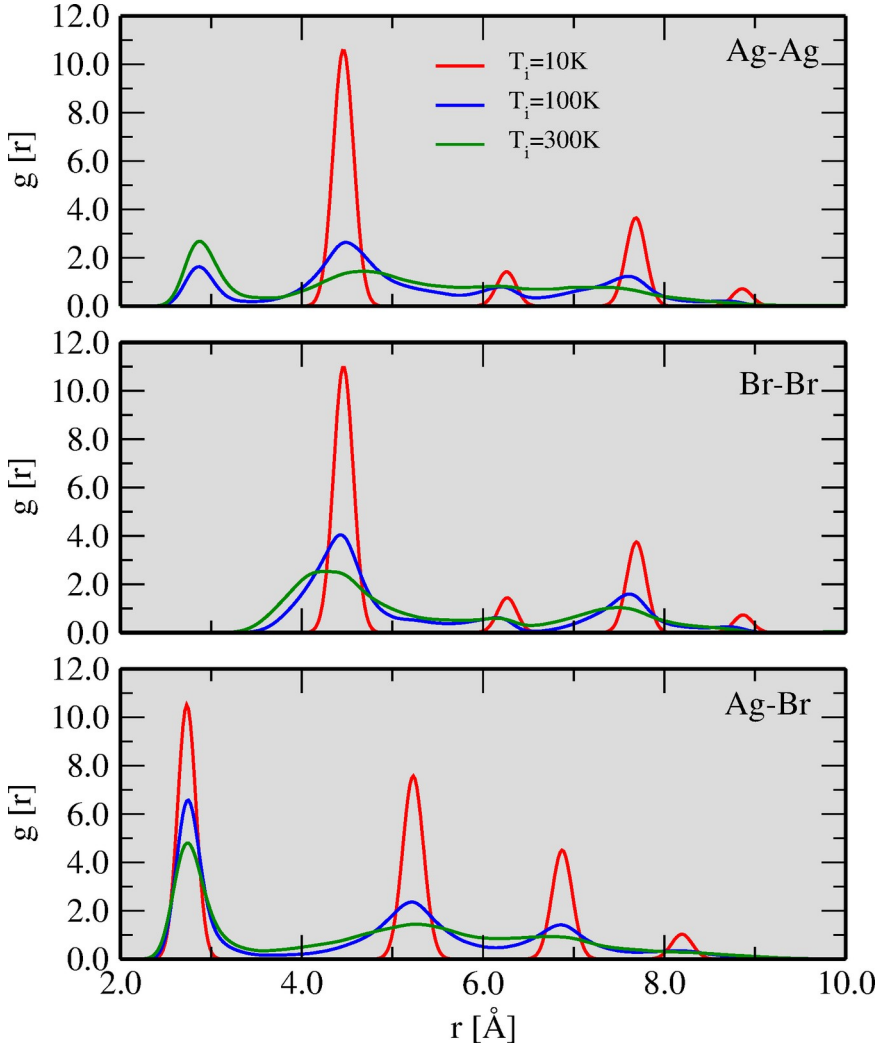

Figure S5. Radial distribution function calculated at 2.00 eV as a function of the lattice temperature at 10 K (red), 100 K (blue) and 300 K (green). The top, center and bottom panels denote the RDF for Ag-Ag, Br-Br and Ag-Br atoms, respectively.