



**Figure 1.** Top-left: Structures of the metal precursors and the reducing agents. Top-middle: Palladium film deposited on soda lime glass substrate. Top-right: Gold film deposited on soda lime glass substrate. Bottom-left: XRD diffractogram of a gold film deposited at 180 °C. Bottom-middle: XRD diffractogram of a palladium film deposited at 180 °C. Bottom-right: XRD diffractogram of a  $\text{Pd}_2\text{Ge}$  film deposited at 180 °C