

A VELOCITY MAP IMAGING ANALYSIS OF $\text{Fe}(\text{CO})_5$, $\text{W}(\text{CO})_6$ AND ELECTRON STIMULATED DESORPTION IN $\text{Me}_2\text{Au}(\text{acac})$

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Tungsten hexacarbonyl and iron pentacarbonyl are two of the common precursors used for Focused Electron Beam Induced Deposition (FEBID). FEBIP is one of the new techniques explored by the nanotechnology industry to build sub-10nm structures. Velocity Map Imaging (VMI) technique has been used in the study of the $\text{Fe}(\text{CO})_5$ and $\text{W}(\text{CO})_6$ compounds to refining Malli L. Gulzari et al. [3], Rosenberg G. et al. [4] the electron beam induced deposition process by giving the essential details on this molecules, such as cross sections, kinetic energies, angular distributions. Neustetter M. et al. [5], Thon R. et al. [6]

A molecular analysis of surfaces and deposition of $\text{Me}_2\text{Au}(\text{acac})$ has been performed using electron stimulated desorption (ESD) and temperature programmed desorption (TPD) revealing the presence of C_2H_2 , AuII, CO, O+. A plain Copper substrate has been used for deposition of the compound at a pressure of 10^{-8} mbar for 2 min, equivalent to 3.4L.

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