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Auger Parameter of Aluminum in aluminum compounds[1] A. CHOURASIA, R. MILLER, G. NIXON, Texas A&M University-Commerce — X-ray photoelectron spectroscopy has been employed to study 1s core level of aluminum in elemental aluminum, and in various aluminum compounds. The XPS spectra in the various regions have been recorded in the high resolution mode. The zirconium anode (energy = 2042 eV) has been used to access the 1s core level of aluminum. The energy difference between the 1s core level and the x-ray excited Auger line of aluminum in the XPS spectrum has been used to calculate the Auger parameter. Wagner plot has been constructed from these data. In this plot the insulating materials appear lower on the grid as compared to those showing metallic nature. The points do not lie on the same line with slope +1, distinctly indicating that aluminum exists in different chemical states in these materials. The estimation of bonding characteristics from this plot will be discussed.

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