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# Formation Energy in Al-Mg Alloy by Positron Annihilation Lifetime Technique (PALT)

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**Abstract:** The propose of the present work is to study the interaction of positrons with quenched-in defects and clustered atoms to estimate formation enthalpy in series 50xx of commercial Al-Mg alloys, namely, 5049, 5051,5052 and 5083 at various concentrations: 1.9, 2.09, 2.46 and 4.44 wt % of Mg, respectively. Typically additional impurities were mainly Si, Fe, Cu, Cr and Ti. The monvacancy formation energy of Al-Mg alloys was measured from a trapping model analysis of the T-dependence of the positron lifetime.

**Key Words:** Lifetime, formation enthalpy, point defects in Al-Mg alloys.

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