

Carrier lifetime variations in proton irradiated LGAD structures

Tuesday 20 June 2023 10:40 (20 minutes)

Carrier lifetime, being sensitive to defects present within the material, is an important parameter governing the operational characteristics of particle sensors. Therefore, the control of carrier lifetime in particle sensor structures is beneficial for predicting the variations of sensors operational characteristics. Microwave probed photoconductivity transients (MW-PC) technique can be employed for measuring of carrier lifetime. In this work, carrier lifetime variations obtained in LGAD structures, irradiated by penetrative protons of energy 24 GeV/c in the fluence range of 1012-1016 cm⁻², are considered.

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Session Classification: Defects