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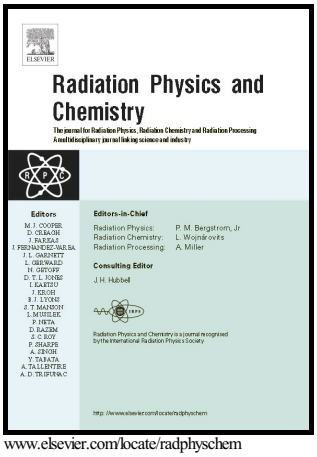

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Calculation of gamma ray attenuation coefficients of some granite samples using a Monte Carlo simulation code

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ABSTRACT

In this study, GATE as a Monte Carlo code is used for calculation of gamma ray attenuation coefficient of some granite samples at 662, 1173.2 and 1332.5 keV photon energies. The simulated results of mass attenuation coefficients were compared with the experimental and theoretical data given in previous study. Satisfactory agreement has been observed between the GATE code and XCOM results. Differences between experimental and theoretical results were between 0.7% - 14.7%. This can be explained by experimental error.

Keyword list: Gamma transmission technique; GATE; Granite; Mass attenuation coefficient; Monte Carlo simulation; XCOM

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