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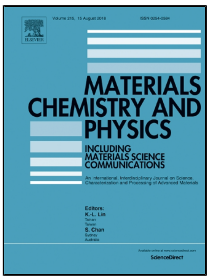

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The effect of ion irradiation on the electron work function of stainless steel

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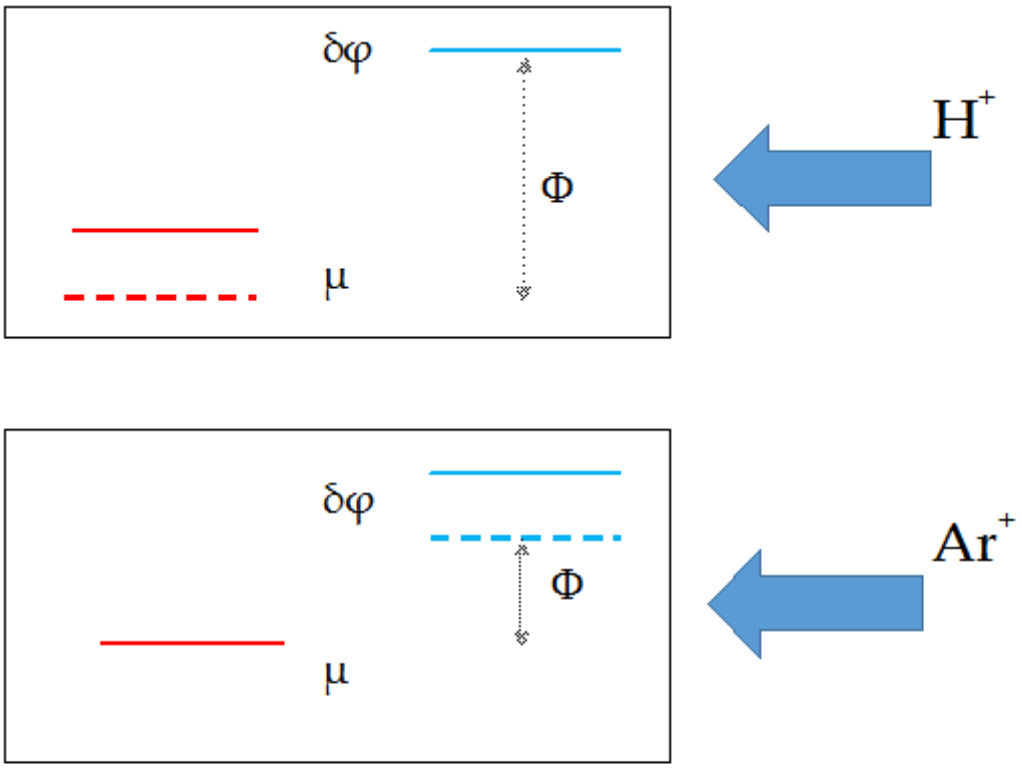
Keywords: Work function, Particle irradiation, Stainless steel, Corrosion



Abstract

Stainless steel samples AISI 321 were iradiated with 100 keV H^+ and 30 keV Ar^+ ions in order to reveal the eventual variation of electron work function, Φ due to high energy radiation. The practical aspect of the research was connected to the change of the steel's corrosion resistance in a nuclear reactor. Work function was measured by the Ambient Kelvin Probe method. Irradiation by Ar^+ was found to bring about a decrease whereas that by H^+ an