BINDING ENERGIES OF Po AND Po^+ WITH ATMOSPHERIC NITROGEN

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The interactions between polonium, a decay product of radon, and nitrogen were examined in an *ab-initio* study. Properties (R_e, D_e) of linear and cyclic N_2Po and N_2Po^+ were determined at various levels of theory (HF, MP2, MRCI including spin-orbit coupling). The geometric arrangements with the lowest energies were found to be linear for both the neutral molecule and the positive ion. Binding energies in both species were determined to be approximately 0.1 eV.