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**APRES study of in-plane element substituted iron-based superconductors $Ba(Fe_{1-x}Co_x)_2As_2$ and $Ba(Fe_{1-x}Ni_x)_2As_2$** JONATHAN BOWEN, Institute of Physics, Chinese Academy of Sciences, KENSEI TERASHIMA, PIERRE RICHARD, TAKAFUMI SATO, TAKASHI TAKAHASHI, Tohoku University, ZHUAN XU, Zhejiang University, HONG DING, Institute of Physics, Chinese Academy of Sciences — Much excitement has surrounded the recent discovery of the doped iron pnictides which exhibit high temperature superconductivity. These new materials are generally grouped into either 1111 or 122 compounds by the stoichiometric formula of the parent compounds. Understanding how doping with in-plane elements with different valence affects their superconducting properties is a vital element of working toward a complete picture of these interesting new compounds. To that end, we have conducted a high-resolution ARPES study of two 122 compounds: $Ba(Fe_{1-x}Co_x)_2As_2$ and $Ba(Fe_{1-x}Ni_x)_2As_2$and will report our results.

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