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X-ray absorption spectroscopy study in the BaFe2As2 family YOONYOUNG KOH, YEONGKWAN KIM, Yonsei university, WANLI YANG, Advanced Light Source, CHANGYOUNG KIM, Yonsei university — One of the representative Fe-based superconductor families, BaFe2As2 (Tc =38K) is a semimetal with the same number of hole and electron carriers, and is in a spin density wave state below 139K. It has been reported that various types of "doped" BaFe2As2 systems can obtained by substitution of Ba, Fe, and As atoms. However, an important issue has been recently raised regarding whether each type of substitution indeed induces effective charge doping or not. It is essential to clarify whether each type of substitution indeed induce an effective doping in BaFe2As2 system. To clarify the carrier doping issue, we performed high resolution X-ray absorption spectroscopy experiment on Ba(Fe,Co)2As2, Ba(Fe,Ru)2As2, BaFe2(As,P)2 which are representative "doped" BaFe2As2 systems.

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