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Electronic structure of LiFe1-xMnxAs (x=0, 0.04) JEONGJIN SEO, Yonsei Univ, BUMSUNG LEE, KEE HOON KIM, Seoul National Univ, CHANGYOUNG KIM, Yonsei Univ — We studied the Mn substitution effect in LiFeAs with Angle Resolved Photoemission Spectroscopy. We found that the slopes of the middle and inner hole bands near the Fermi energy decrease upon Mn doping, resulting in downward shift of the band tops. Meanwhile, band positions away from the Fermi energy remain more or less the same. We attribute such change to the change in the coupling strength between electron and a bosonic mode. In addition, the size of the band splitting between the middle and inner hole bands at the Gamma point which was suggested to represent the size of Ferro-orbital fluctuation does not change, in a sharp contrast to the case of Co doped LiFeAs. This result suggests that the band splitting is not related to the T_c suppression in LiFe1-xMnxAs system.

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