

Abstract Submitted
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Synthesis and superconductivity in Li-Fe-As-N¹ H.H. SUNG, K.J. SYU, S.C. CHEN, W.H. LEE, National Chung Cheng University, W.H. LEE TEAM — The preparation of LiFeAs compound either in polycrystal or single crystal form is difficult to handle due to its reactivity with air and sensitivity to moisture of lithium. In this report we use Li₃N, Fe and As as starting materials. During the heating process, no high pressure, no Ta, Nb or W tube, is required to synthesize the polycrystalline sample. The crystallographic data and superconducting transition temperature (T_c) of the samples as prepared have been investigated through powder x-ray diffraction, magnetization and electrical-resistivity measurements. Discussion will be directed toward the influence of N on the superconductivity in Li-Fe-As from the viewpoint of pinning or substitute effect.

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