

Abstract Submitted  
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**Pressure effects on superconductivity in LaFeAsO<sub>1- $\delta$</sub>**  FUMIHIRO ISHIKAWA, Department of Physics, Niigata University, MICHIIHIRO KODAMA, NAOYA EGUCHI, Graduate School of Science and Technology, Niigata University, AYAKO OHMURA, ATSUKO NAKAYAMA, Center for Transdisciplinary Research, Niigata University, YUH YAMADA, Department of Physics, Niigata University — Pressure effects on superconductivity in LaFeAsO<sub>1- $\delta$</sub>  oxypnictide were studied using piston-cylinder type pressure cell. LaFeAsO<sub>1- $\delta$</sub>  has been recognized as one of the typical FeAs-based superconductor since the discovery of superconductivity in LaFeAs(O, F). Oxygen deficiency in LaFeAsO leads doping and causes superconductivity. Pressure dependence of the superconducting transition temperature of LaFeAsO<sub>0.7</sub> was clarified by electrical resistivity measurement up to the pressure of  $P = 2.5$  GPa. The sample of LaFeAsO<sub>0.7</sub> was prepared by high pressure synthesis technique. Using a cubic-anvil-type apparatus the sample was sintered at 1250°C under the pressure of 3 GPa. Oxygen deficiency was estimated from the nominal composition of starting materials. At ambient pressure, LaFeAsO<sub>0.7</sub> shows superconducting transition at  $T_c = 21.8$  K. With increasing pressure,  $T_c$  increased almost linearly with coefficient of  $dT_c/dP = 2.6$  K/GPa. The pressure dependence of  $T_c$  in LaFeAsO<sub>0.7</sub> is similar to that of an under doped sample in the LaFeAs(O, F) system.

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