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## Nanowires of KP<sub>15</sub> produced by liquid exfoliation

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### Abstract

We report the liquid exfoliation of an anisotropic layered material: KP<sub>15</sub> to form KP<sub>15</sub> nanowires with thicknesses up to a few nanometers. Meanwhile, KP<sub>15</sub> nanowire is the first kind of nanowire that can be prepared by liquid exfoliation. Moreover, sections of the KP<sub>15</sub> nanowires were irregular and the longitudinal direction of the KP<sub>15</sub> nanowire is along the direction of the phosphorus tube. Those results may indicate that in-plane phosphorus tubes can also be separated during exfoliation, making the preparation of a few tubes of KP<sub>15</sub> possible. That could provide a basis for further low dimensional physics research.

**Keywords:** KP<sub>15</sub>; liquid exfoliation; nanowires, nanoparticles, multilayer structure

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