



## 3d Printed And In-Situ Poled Flexible Piezoelectric Pressure Sensor

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### The Invention

A piezoelectric artificial artery can be 3D printed to provide the real-time precise sensing of blood pressure and vessel motion patterns enabling early detection of partial occlusions. An electric-field assisted 3D printing method allows for rapid printing and simultaneously poled complex ferroelectric structures with high fidelity and good piezoelectric performance. The print material consists of ferroelectric potassium sodium niobite (KNN) particles embedded within a ferroelectric polyvinylidene fluoride (PVDF) polymer matrix.

### Additional Information

#### For More Information About the Inventors

- [Xudong Wang](#)

#### Publications

- [Read a news story about this technology.](#)

#### Tech Fields

- [Medical Devices : Diagnostics & monitoring tools](#)

For current licensing status, please contact Michael Carey at [mcarey@warf.org](mailto:mcarey@warf.org) or 608-960-9867