Current microresonator sensor technology requires a tapered pulled strand of glass fiber optics, which can be finer than a human hair. This method produces a very fragile sensor.

Other recent sensor developments provide a nano ring that has been produced from lasering a glass surface. These devices are time consuming and exacting to produce.

The Bullet Microresonator Sensor provides the same level of sensitivity as these others devices with an easier process of production and a sensor that can be used in many different applications and environments.

Benefits of Technology:
- Cheaper and Faster Production
- More Robust Sensor
- Material of Capillary and Microsphere is Interchangeable
- Capillary and Microsphere can be Etched for Resizing
- Can be Coated for Biological Sensing

Potential Commercial Applications
Because the Bullet Microresonator Sensor is more robust, it can be used in a wider range of applications. Its sensing capabilities include chemical applications and the ability to detect vapors, and it can be coated to detect biological materials. Since the size and material of the Bullet Microresonator Sensor can be changed, it can be used to detect a range of specific materials. The Bullet Microresonator Sensor can also be used as a laser if the light were to be focused by the microsphere. Because of this aspect the Bullet Microresonator Sensor can also be utilized in lasing applications.

IP Status
- U.S. Patent Application Filed

Development Status
- Prototype Successfully Built and Tested