

## **Improved Nonlinear Interferometer**

### **Disclosure Number**

201603623

### **Technology Summary**

This invention relates sensors and more specifically to an improved interferometer with twice the sensitivity of conventional nonlinear interferometers with fewer components reducing the cost and complexity. Our design does not require active stabilization. It can be configured for wide bandwidth operation with multiple lasers for sensing many analytes simultaneously and independently. This design can be realized in free-space, or in waveguides such as fiber optics or on-chip to create optical sensors with a variety of nonlinear optical materials. The flexibility with which this may be implemented means that it can be driven at many different wavelengths depending on the nonlinear material chosen.

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