

## Single-Contact Tunneling Thermometry

### **Disclosure Number**

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### **Technology Summary**

Although temperature measurements on the micro- and nanoscale are greatly challenging, they are vitally important in a large number of technological processes. The most advanced optical methods for thermal measurements, relying on spectroscopy of infrared photons, can only provide a resolution on the order of 1 micrometer. The subject invention comprises apparatus and method for nanoscale thermometry. The invention is suitable for measuring electronically conducting and semiconducting objects that provides a spatial resolution of less than 10 nanometers, enabling a direct measurement of local temperature distribution and operates in the tunneling regime, introducing the least perturbation to the studied object.

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