

A Nonlinear Resonator and Method for Ultra Sensitive Chemical Detection

Disclosure Number

201002375

Technology Summary

This invention relates to a method of evaluating resonance responses of nonlinear NEMS or MEMS devices due to mass or force loading or other stimuli. The method allows a suitable NEMS or MEMS device or array to function as, e.g., a highly sensitive detector of chemical or biological species. The resonating structures applicable to this invention can be in a form of suspended beams or a more complex, arbitrary geometry with one or several clamping points.

Inventor

LAVRIK, NICKOLAY V

Center for Nanophase Matls Sciences Div

Licensing Contact

SIMS, DAVID L

UT-Battelle, LLC

Oak Ridge National Laboratory

Rm 124C, Bldg 4500N, MS: 6196

1 Bethel Valley Road

Oak Ridge, TN 37831

Office Phone: (865) 241-3808

E-mail: SIMSDL@ORNL.GOV

Note: The technology described above is an early stage opportunity. Licensing rights to this intellectual property may be limited or unavailable. Patent applications directed towards this invention may not have been filed with any patent office.