OAK RIDGE NATIONAL LABORATORY
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High-Throughput Reproducible Cantilever Functionalization

Disclosure Number

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Technology Summary

A technique for rapid, reproducible functionalization of multiple cantilevers for atomic force attraction measurements or cantilever sensor has been devised and demonstrated that utilizes a special device suitable for simulataneously dipping fragile cantilever probes into multiple solutions without damage using standard multiwell plates. The device design enables high-through put, uniform functionalization of the probes by multistep reaction schemes to impart the specificity of choice by chemical attachment of ligand molecules. It provides fast preparation of ligand-modified cantilever probes for chemical force measurements and nanoscale mapping using atomic force microscopes and avoids costly metallic coatings and breakage.

Inventor

EVANS, BARBARA R

Chemical Sciences Division

Licensing Contact

CALDWELL, JENNIFER T
UT-Battelle, LLC
Oak Ridge National Laboratory
Rm 137, Bldg 4500N, MS: 6196
1 Bethel Valley Road
Oak Ridge, TN 37831

Office Phone: (865) 574-4180
E-mail: CALDWELLJT@ORNL.GOV

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