

High Heating Rate Thermal Desorption for Molecular Surface Sampling

Disclosure Number

201202957

Technology Summary

We conceive a resistively heated probe of appropriate composition with drive electronics suitably configured that can achieve pulsed heating rates of the probe at rates of at least 10^9 deg C/s for thermal desorption of macromolecules intact from surfaces with subsequent ionization and analysis by mass spectrometry. With a properly sized heated probe and incorporation of the probe in a device with AFM like control this process could be used for defined surface spatial profiling or chemical imaging.

Inventor

VAN BERKEL, GARY J
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

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.