

## Controlling trapping and ejection of ions from multipole guides and traps

### **Disclosure Number**

200902348

### **Technology Summary**

This invention solves the fringe field problem of multipole ion guides and traps. It can be used to inject ions of any mass into a TOF or ion trap with low kinetic energy. The concept can be used to control the kinetic energy of the ions and their dispersion or focus. Because of this invention, the time of flight mass spectra of large ions above 20 kDa can now be measured with high resolution and sensitivity. This invention permits high resolution mass spectrometry below 20 kDa too while maintaining sensitivity. This is currently not true of existing commercial Q-TOF systems.

### **Inventor**

REILLY, PETER T

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](mailto: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.