

Available Technologies

Ion Funnel Trap

Battelle Number(s): 15815

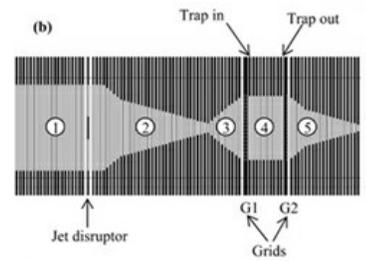
Patent(s) Issued

Available for licensing in all fields

SUMMARY

This technology is an extension of PNNL's award-winning and previously licensed ion funnel trap technology. It improves upon the original technology by providing a high charge capacity trap (10x that of available commercial traps). Operating in the trapping mode has been shown to increase sensitivity by an order of magnitude (10x) compared to operating in a continuous mode. Also, controlling the ion ejection time has been shown to result in the efficient removal of singly charged ions, thus increasing the signal-to-noise for measurement of multiply charged species. The high sensitivity and efficient trapping capability of the patented ion funnel trap has led to its application in several emerging PNNL instrument systems. These include the multidimensional analytical platform based on integrated LC/IMS/TOF-MS and a high-sensitivity triple quadrupole system. The ion funnel trap has been fully implemented and demonstrated in numerous mass spectrometry systems at PNNL and is available for immediate deployment in commercial systems.

The technology also includes a second patent covering a "gridless" version of the trap that utilizes an Rf and DC voltages to trap and release ions at relatively high pressures.



PATENTS & INTELLECTUAL PROPERTY

- 7,888,635
- 9,245,725

TECHNOLOGY PORTFOLIO(S)

- Analytical Instruments

PORTENTIAL INDUSTRY APPLICATION(S)

- Chemicals
- Healthcare, Pharma, Biotech & Medical
- Professional Services
- Security

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