

Miniature Ion Traps and Arrays for High Pressure Mass Spectrometry

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The approach we have taken to high pressure ion trap mass spectrometry is to use ion traps with dimensions comparable to or less than the mean free path. The number of collisions per RF cycle is reduced by operation at high frequency. We will describe some experimental results with ion traps from 1-mm diameter to as small as 40 μm . We have been able to obtain mass spectra at pressures above 1 Torr.

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