

An ingenious invention for mass spectrometry instrumentation to push the limits of quadrupole analyser



KEYWORDS

- o Mass spectrometry
- o Quadrupole analyser
- o Resolution
- o Efficiency

PATENTS

- o EP18305764.5
19th August 2018

INVENTORS

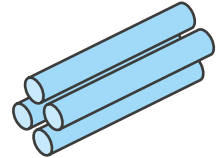
- o Emil TRAYKOV.
CNRS-IPHC
UMR 7178

TECHNO-STATUS

- Under Development**
- o 22-months ongoing Conectus investment for demonstrating the competitiveness of the innovation
- o open for exclusive licensing option with an industrial partner

TECHNOLOGY

- o New geometry of the quadrupole:
 - o Special design of radiofrequency rods
 - o Application of different electric fields
 - o High stability electronics
- o Precise control of the low frequency motion in the two transverse directions of the quadrupole
- o A different strategy of particles filtering inside the device

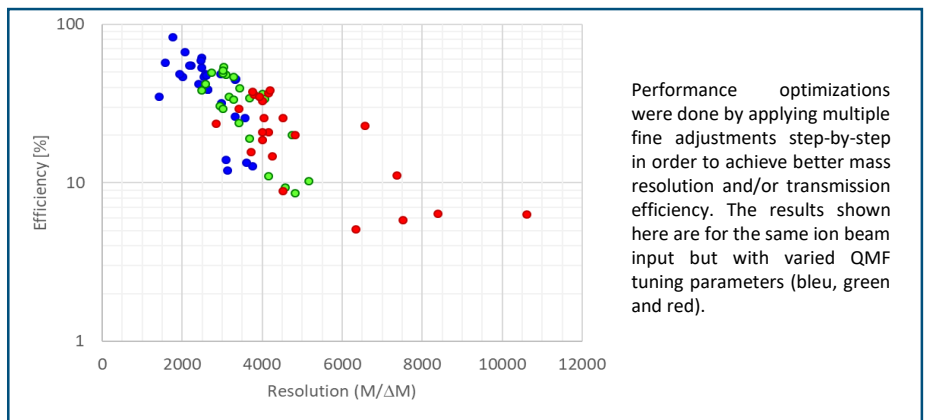


APPLICATIONS

- o High resolution mass spectrometry

INNOVATION ADVANTAGES

- o COMPARED TO CURRENT QUADRUPOLES :
 - o 10 times better resolution at given transmission efficiency
 - o Mass range of the analyzer is not modified by the innovation
 - o New applications in a growing market
 - o At a reasonable price (lower than TOF analyzer)



DEVELOPMENT STATUS

- o Prototype available now
- o Demonstrations of the performances on whole MS instrument reviewed in April 2019