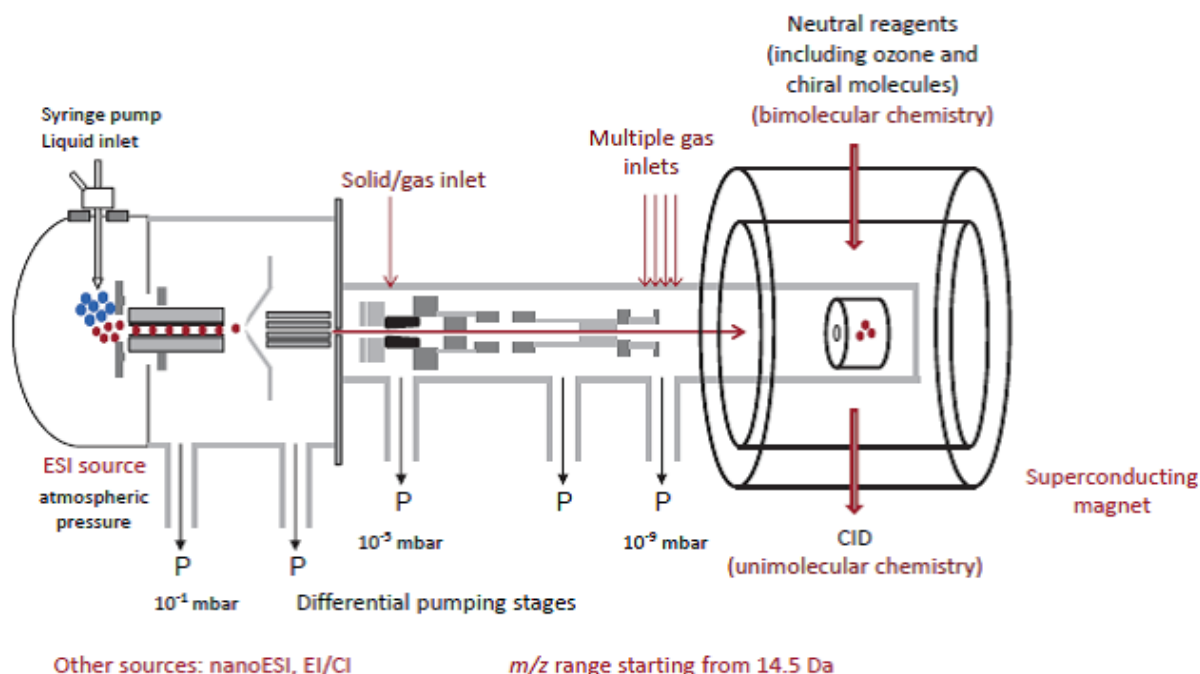


Overview of the FT-ICR mass spectrometry platform

FT-ICR mass spectrometer Bruker Apex II, 4.7 T



Sample preparation and ionization

In general, 10-100 μ L of 1mg/ml sample is adequate for analysis (to be further diluted prior to analysis). In the case of a solid sample, 100 μ g would be sufficient. Solubility in a suitable solvent (methanol and water are most preferred for ESI) should be stated. Solvents with high boiling points (such as DMSO or DMF) should be avoided because they are particularly mass spec unfriendly. Samples should be free of salts and detergents.

ESI is the primary method of choice. It allows to deliver analyte ions directly from the solution, sprayed by a needle at high voltage. Charged droplets are generated that progressively become smaller through evaporation. When the droplets become too small to host the charged molecules, ions are ejected into the gas phase, to be analyzed by the mass spectrometer.