

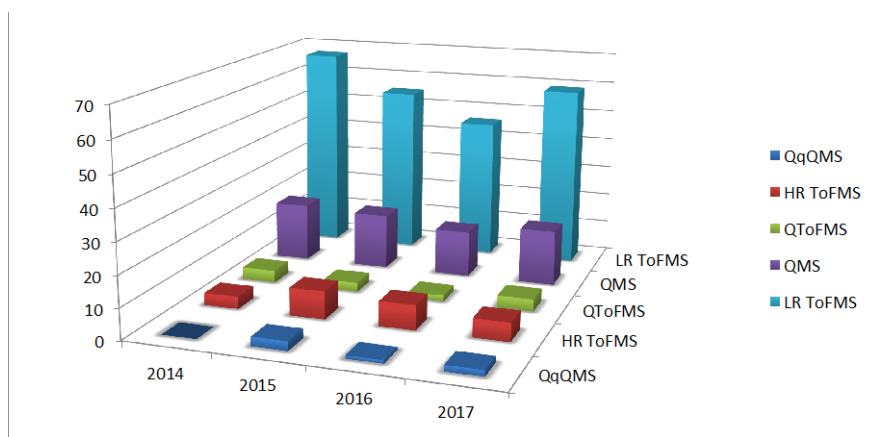
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Topic 1: The Force of habit: Is it time for a change?

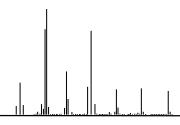
Discussed points	Thoughts from the Audience, snapshots
Cryogenic vs. alternative consumable-free thermal modulation devices	<ul style="list-style-type: none"> Many attendees have both cryogenic and another form of modulation Interest in SSM
Are other mass-based detection devices (apart from LT ToFMS) up to the 2nd dimension challenge?	<ul style="list-style-type: none"> Audience agrees that instrumentally other mass selective devices are fitted for 2nd dimension analyses. Concerns about data quality were voiced In detail, the suitability of QMS and QqMS were discussed. QMS: mainly yes, spectral skewing could be an issue; QqMS: yes, scepticism towards its use
Is mass spectrometry the only tool of trade? Will other detection techniques, suitable for GCxGC such as VUV, replace MS?	<ul style="list-style-type: none"> The fundamental role of MS emerged, and its importance in regulatory methods. The audience agreed that there is no replace for MS, after a brief discussion of its value and core role Audience discussed VUV in greater detail, considering it's complementarity as a possibility (simultaneously if applicable) possible interest in the use of ion-mobility spectrometry

Mass analyzers: situation across the 2014-2017 period



2014: 94 papers
2015: 88 papers
2016: 72 papers
2017: 89 papers

Source: Scopus.com



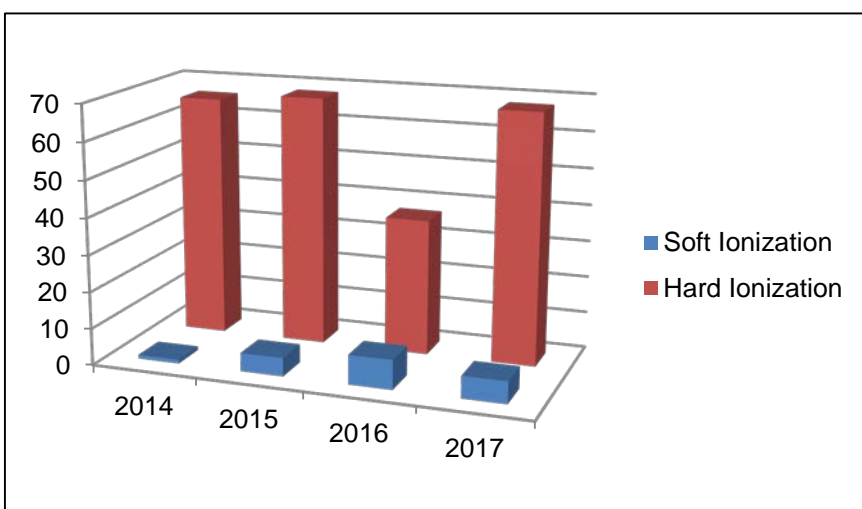
Topic 2: Adding more complexity!

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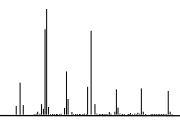
Discussed points	Thoughts from the Audience, snapshots
Cryogenic vs. alternative consumable-free thermal modulation devices	<ul style="list-style-type: none"> The feasibility and analytical benefits of soft ionization were discussed. “Do we need the molecular ion“! Interest in the use of soft ionization technologies, due to more MW information and more sensitive quantification Complementary with 70 eV EI Field ionization as technique was brought up, especially it’s use in industry applications and its rare description in the literature In general, there seems to be a general consensus that soft ionization is interesting in an academic sense
GC×GC-HR ToFMS: is the combination too powerful?	<ul style="list-style-type: none"> Extremely powerful technology; however, most applications can be performed by using LR ToFMS and QMS
GC×GC-HR QqQMS: is there one dimension too much?	<ul style="list-style-type: none"> Scepticism towards its utility; used mainly in pre-targeted analyses

Ionization: situation across the 2014-2017 period



Hard ionization: 92.4%
Soft ionization: 7.6%

Source: Scopus.com



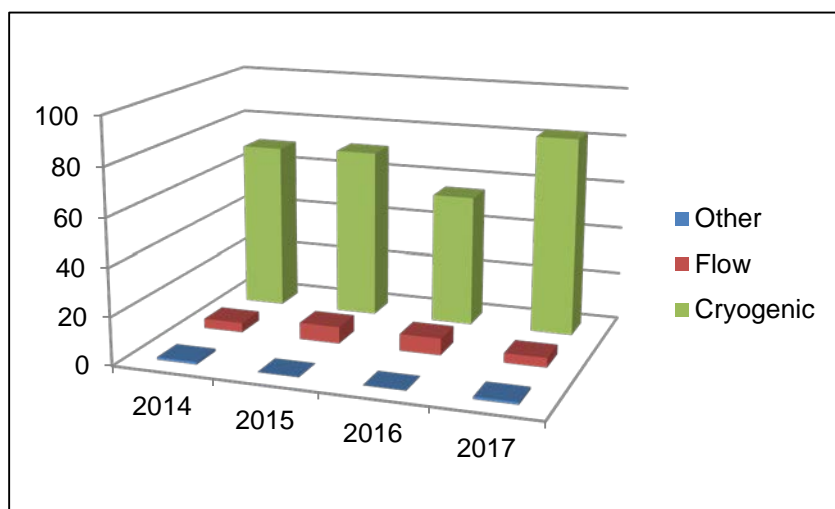
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Topic 3: MS and flow modulation....a rocky marriage!

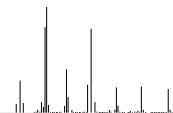
Discussed points	Thoughts from the Audience, snapshots
Flow-modulated GC×GC-MS: why is it so rarely used?	<ul style="list-style-type: none">• Issue with flow though several reduced-flow approaches have emerged• Not many participants use flow modulation.• However alternative consumable-free technologies such as the SSM appear to be of interest
Flow-modulated GC×GC-MS vs thermal-modulation GC×GC-MS: advantages and disadvantages	<ul style="list-style-type: none">• Flow modulation is more difficult to optimize, but with no restrictions in MW range and a high educational value.

Modulation: situation across the 2014-2017 period



Cryogenic: 92.1%
Flow: 7.3%
Other: 0.6%

Source: Scopus.com



Topic 4: Bigger, better, faster, more complex?!

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Discussed points	Thoughts from the Audience, snapshots
<p>GC×GC-MS is still considered as a technique for the experts, with a large lab footprint. This is contradictory to the high demand for faster, fully automated methods with simple reporting and minimal review. Is the technique already up to such a task?</p>	<ul style="list-style-type: none">• A somewhat heated discussion sparked• The intimidation of new, complex technology and how to advertise it to new people was controversially discussed.• Even if the hardware is up to the task approaches like “use what you have and upgrade it” and “keep it simple vs. make it the most sophisticated instrument” were discussed• Modular instrumentation that could be gradually upgraded would be nice• Data processing of industrial applications in series takes time and may appear intimidating