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Authors: Lukasz G. Migas, Aidan P. France, Bruno Bellina, Perdita E. Barran

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ACCEPTED MANUSCRIPT

ORIGAMI: A Software Suite for Activated Ion Mobility Mass Spectrometry (aIM-MS) Applied To Multimeric Protein Assemblies

Lukasz G. Migas, Aidan P. France, Bruno Bellina and Perdita E. Barran*

Michael Barber Centre for Collaborative Mass Spectrometry, School of Chemistry and Manchester Institute of Biotechnology The University of Manchester, 131 Princess Street, Manchester, M1 7DN, United Kingdom

*Correspondence and request for materials should be addressed to Professor Perdita Barran (email: perdita.barran@manchester.ac.uk)

Graphical abstract



Highlights

- New methodology for controlling acquisition parameters and faster data analysis following activation of ions separated by ion mobility mass spectrometry.
- Software package capable of simultaneous analysis of multiple MassLynx .raw files.
- Visualization of the change in mobilities for both parent and product ions following activation.
- Easy extraction, data processing and extensive plotting tools.

Abstract

We present here a software suite (**ORIGAMI**) that facilitates the rapid acquisition and analysis of ion mobility data following collisional activation. **ORIGAMI** was developed for use on Waters Synapt instruments where data acquisition is achieved by interfacing WREnS (Waters Research Enabled Software) and MassLynx. Two components are presented, the first is **ORIGAMI**^{MS} which enables the activation of ions via a sequential ramping of collision voltage prior to ion mobility analysis. We

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