

# Innovations in ambient mass spectrometry imaging

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Propositions accompanying the dissertation

# INNOVATIONS IN AMBIENT MASS SPECTROMETRY IMAGING

## FROM IONIZATION TO DETECTION

By Petrus (Pieter) Christian Kooijman

1. Ionization reproducibility is the single most important aspect the ambient MSI field needs to improve to qualify for large-scale application. - *This dissertation*
2. Sequential desorption and ionization in ambient MSI can only effectively work if the surrounding atmosphere is fully controlled. - *This dissertation*
3. High mass resolving power and broad molecular coverage are both essential for exploratory MSI approaches, of which the latter is the most troublesome. - *This dissertation*
4. High sensitivity is useless in untargeted MSI approaches if the mass resolving power is low. - *This dissertation*
5. The end-user perspective should be central in early-stage instrument development. - *This dissertation, impact chapter*
6. Separation on a single dimension can never resolve all molecular species.
7. "Things are only impossible until they are not." - *Jean-Luc Picard*
8. Instrument development should be a playground, rather than a project.
9. Data do not equal information.
10. At the foot of the mountain I always say: 'Wow, what an immensely beautiful mountain you are.' - *Bram Tankink*