

Master Thesis Opportunity at FAU Erlangen-Nürnberg:

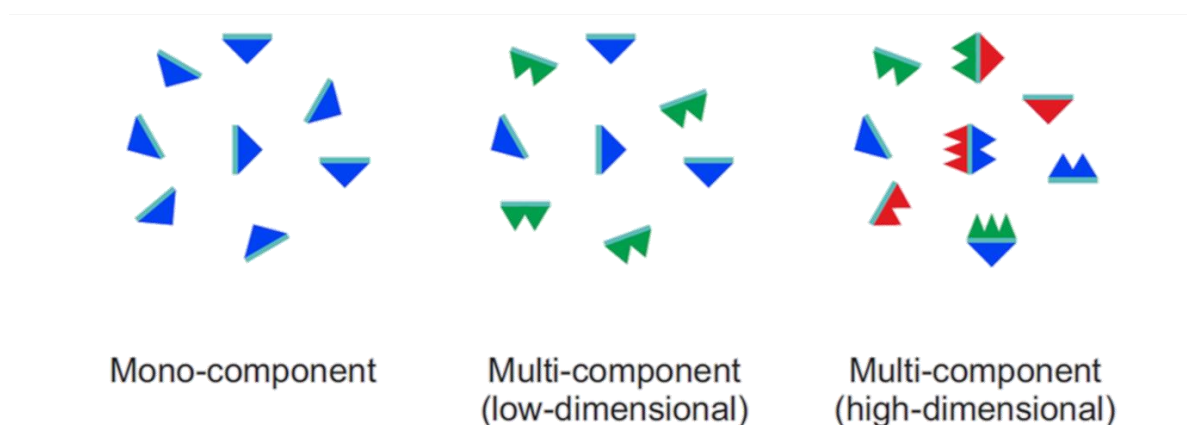
Material Effects in Airborne Chemical Systems

Research Project

Airborne chemical compounds are involved in many natural and technical environments. Their behavior can be influenced by interactions with surrounding materials and environmental conditions, affecting transport and detection processes in ways that are not yet fully understood [1,2,4].

Modern sensing and analytical techniques enable increasingly detailed investigation of airborne chemical systems and provide new opportunities for studying interactions and processes under realistic conditions [2,3].

This thesis aims to investigate material-dependent effects in controlled airborne chemical systems. The work includes the design and execution of laboratory experiments, data analysis, and interpretation of experimental results.



Your Profile:

- Master student in Chemistry, Food Chemistry, or related field
- Strong interest in experimental and analytical chemistry
- Interest in gas-phase analysis and data interpretation

Application and Contact:

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Chair: Aroma and Smell Research

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Starting date: flexible

References

- [1] X. Yang et al., "A mass transfer model for simulating VOC sorption on building materials, Atmospheric Environment", Volume 35, Issue 7, 2001, Pages 1291-1299.
- [2] S. Murakami et al., (2003) "Modeling and CFD prediction for diffusion and adsorption within room with various adsorption isotherms." Indoor Air, 13: 20-27.
- [3] A. Vergara et al., "Chemical gas sensor drift compensation using classifier ensembles", Sensors and Actuators B: Chemical, Volumes 166–167, 2012, Pages 320-329.
- [4] N. Farsad, H. B. Yilmaz, A. Eckford, C. -B. Chae and W. Guo, "A Comprehensive Survey of Recent Advancements in Molecular Communication," in IEEE Communications Surveys & Tutorials, vol. 18, no. 3, pp. 1887-1919, thirdquarter 2016.