

# List of Publications

Natalia Spitha

## Dissertation

**Spitha, N.** (2021): Simulations as Epistemic Glue Between Differential Equations and Photophysics: Layered Perovskite Carrier Dynamics and the Origins of the Beer-Lambert Law

## Articles in Peer-Reviewed Journals:

1. **Spitha, N.**, Zhang, Y., Pazicni, S.\*, Fullington, S.A., Morais, C., Buchberger, A.R., Doolittle, P.S. (2024): Supporting submicroscopic reasoning in students' explanations of absorption phenomena using a simulation-based activity. *Chem. Educ. Res. Pract.*, DOI: [10.1039/D3RP00153A](https://doi.org/10.1039/D3RP00153A)
2. **Spitha, N.**, Doolittle, P. S.\*, Buchberger, A. R., Pazicni, S. (2021): A Simulation-Based Guided Inquiry Activity for Deriving the Beer-Lambert Law. *J. Chem. Educ.*, 98, 1705-1711.
3. Kuo, M-Y., **Spitha, N.**; Hautzinger, M. P., Hsieh, P-L., Li, J., Pan, D., Zhao, Y., Chen, L-J., Huang, M.H., Jin, S.,\* Hsu, Y-J.,\* Wright, J.C.\* (2021): Distinct Carrier Transport Properties across Horizontally versus Vertically Oriented Heterostructures of 2D/3D Perovskites. *J. Am. Chem. Soc.* 143, 4969-4978.
4. Pan, D., Fu, Y.\*, **Spitha, N.**, Zhao, Y., Roy, C. R., Morrow, D. J., Kohler, D. D., Wright, J. C.,\* Jin, S.\* (2021): "Deterministic Fabrication of Arbitrary Vertical Heterostructures of two-dimensional Ruddlesden-Popper Halide Perovskites. *Nat. Nanotechnol.* 16, 159-165.
5. **Spitha, N.**, Kohler, D. D., Hautzinger, M. P., Li, J., Jin, S., Wright, J. C.\* (2020): Discerning between Exciton and Free-Carrier Behaviors in Ruddlesden-Popper Perovskite Quantum Wells through Kinetic Modeling of Photoluminescence Dynamics. *J. Phys. Chem C.* 124, 17530-17439.
6. Hautzinger, M. P., Pan, D., Pigg, A. K., Fu, Y., Morrow, D. J., Leng, M., Kuo, M.-Y., **Spitha, N.**, Lafayette, D. P., Kohler, D. D., Wright, J.C., Jin, S.\* (2020): Band Edge Tuning of Two-Dimensional Ruddlesden-Popper Perovskites by A Cation Size Revealed through Nanoplates. *ACS Energy Lett.* 5, 1430-1437.

## Posters and Conference Talks:

1. Spitha, N., Rüdiger Tiemann: Simulationsbasierte Aktivitäten für Chemiestudierende, *GDCP Jahrestagung*, Aachen, Deutschland, 12.-15. September, 2022, Poster #P103
2. Zhang, Y., Spitha, N., *et al.*: Effects of a Simulation-Based Activity on Student Reasoning about Absorption. *Biennial Conference on Chemical Education*, West Lafayette, IN, USA, 31. Juli- 4. August, 2022, Vortrag #2:45 851

3. Spitha, N., Doolittle, P. S.: Strategies for Cultivating Student Autonomy and Confidence in an Undergraduate Analytical Chemistry Research Project. *CIRTL Forum*, Philadelphia, PA, USA, 13.-15. Oktober, 2019; Poster #21
4. Spitha, N., Sawicki, J., Zakharova, A., Abel, M.; Schöll, E.: Synchronization of Organ Pipes. *Workshop on Control of Self-Organizing Nonlinear Systems*, Lutherstadt Wittenberg, Deutschland, 14.-16. September, 2015 [Poster]
5. Spitha, N., Blauch, D. N.: Reactivity of ruthenium-salicylaldehyde complexes with benzylamine. *250<sup>th</sup> National Meeting and Exposition of the American Chemical Society*, Boston, MA, USA, 16.-20. August, 2015; CHED-281. [Poster]
6. Spitha, N., Stevens, E. P.: Antiviral 1-glycosyl-1,2,3-triazoles. *246<sup>th</sup> National Meeting and Exposition of the American Chemical Society*, Indianapolis, IN, USA, 8.-12. September, 2013; MEDI 248. [Poster]