List of Publications

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Five Most Important Publications

[1] I. Neumann, I. Kosolapova, **B. Rasche**†, "Discovering Perovskite-Derived Tungsten Bronzes from In Situ Diffraction of Electrochemical Rubidium and Cesium Intercalation", *Chem. Mater.* **2024**, *36*, 12026–12033, DOI 10.1021/acs.chemmater.4c02900.

[2] B. Kannen, **B. Rasche**†, "Alkaline Metal Intercalates of VSe_2 by Electrochemical Intercalation", *Z. Anorg. Allg. Chem.* **2024**, *650*, e202300165, DOI 10.1002/zaac.202300165.

[3] **B. Rasche**†, "Can electrochemistry help to understand superconductivity – β-$Fe_{1+x}Se$ as a case study", *Curr. Op. Electrochem.* **2021**, *25*, 100630, DOI 10.1016/j.coelec.2020.08.012.

[4] **B. Rasche**†, M. Yang, L. Nikonow, J. F. K. Cooper, C. A. Murray, S. J. Day, K. Kleiner, S. J. Clarke, R. G. Compton, "In-situ Electrochemical X-ray Diffraction: A Rigorous Method to Navigate within Phase Diagrams Reveals β-$Fe_{1+x}Se$ as Superconductor for All x", *Angew. Chem. Int. Ed.* **2019**, *58*, 15401–15406, DOI 10.1002/anie.201907426; *Angew. Chem.* **2019**, *131*, 15547–15552, DOI 10.1002/ange.201907426.

[5] **B. Rasche**, A. Isaeva, M. Ruck, S. Borisenko, V. Zabolotnyy, B. Büchner, K. Koepernik, C. Ortix, M. Richter, J. van den Brink, "Stacked topological insulator built from bismuth-based graphene sheet analogues", *Nat. Mater.* **2013**, *12*, 422–425, DOI 10.1038/nmat3570.

Reviews

[1] **B. Rasche**†, H. A. Schwartz, "Trendbericht Festkörperchemie und Materialforschung 2024", *Nachrichten aus der Chemie* **2024**, *72*, 50–58, DOI 10.1002/nadc.20244139260.

[2] I. Neumann, **B. Rasche**†, "In situ diffraction in electrochemistry – A practical introduction for experiments beyond batteries", *Curr. Op. Electrochem.* **2023**, *39*, 101288, DOI 10.1016/j.coelec.2023.101288.

[3] **B. Rasche**†, "Can electrochemistry help to understand superconductivity – β-$Fe_{1+x}Se$ as a case study", *Curr. Op. Electrochem.* **2021**, *25*, 100630, DOI 10.1016/j.coelec.2020.08.012.

Original Articles

[1] A. I. A. Emminghaus, J. Papenfuß, A. Mertens, **B. Rasche**†, "Synthetic Access to Alkali Metal Selenides via Ball Milling", *Z. Anorg. Allg. Chem.* **2025**, *652*, e202500148, DOI 10.1002/zaac.202500148.

[2] C. D. Lima, L. L. Machado, L. C. Arantes, C. C. Nascentes, **B. Rasche**, W. T. P. dos Santos, "Straightforward screening of ketamine in forensic samples using voltammetry with screen-printed carbon graphite electrodes", *Talanta* **2026**, *299*, 129028, DOI 10.1016/j.talanta.2025.129028.

[3] S. K. Alavi, C.-I. Ho, I. Neumann, D. Eberle, V. Vorobyov, **B. Rasche**, S. Hong, "Optical levitation of fluorescent silicon carbide nanoparticles in vacuum", *AIP Advances* **2025**, *15*, 085307, DOI 10.1063/5.0277100.

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[5] I. Neumann, I. Kosolapova, **B. Rasche**†, "Discovering Perovskite-Derived Tungsten Bronzes from In Situ Diffraction of Electrochemical Rubidium and Cesium Intercalation", *Chem. Mater.* **2024**, *36*, 12026–12033, DOI 10.1021/acs.chemmater.4c02900.

[6] N. T. Flosbach, M. Bykov, E. Bykova, **B. Rasche**, M. Mezouar, T. Fedotenko, S. Chariton, V. B. Prakapenka, M. S. Wickleder, "Stabilization of Pr^{4+} in Silicates–High-Pressure Synthesis of $PrSi_3O_8$ and $Pr_2Si_7O_{18}$", *Inorg. Chem.* **2024**, DOI 10.1021/acs.inorgchem.3c03948.

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