

List of publications - Dr. V. Zamudio-Bayer

32. M. Tombers, J. Meyer, J. Meyer, A. Lawicki, **V. Zamudio-Bayer**, K. Hirsch, J. T. Lau, B. von Issendorff, A. Terasaki, T. Schlathölter, R. Hoekstra, S. Schmidt, A. K. Powell, E. Kessler, M. H. Prosenc, C. van Wüllen, and G. Niedner-Schatteburg, *Mn₁₂-acetate complexes studied as single molecules*
Chem. Eur. J. Accepted Article (2021).
31. R. C. Couto, W. Hua, R. Lindblad, L. Kjellsson, S. L. Sorensen, M. Kubin, C. Bülow, M. Timm, **V. Zamudio-Bayer**, B. von Issendorff, J. Söderström, J. T. Lau, J. -E. Rubensson, H. Ågren, and V. Carravetta, *Breaking inversion symmetry by protonation: experimental and theoretical NEXAFS study of the diazynium ion, N₂H⁺*
Phys. Chem. Chem. Phys. 23, 17166 (2021).
30. X. Wang, S. Rathnachalam, K. Bijlsma, W. Li, R. Hoekstra, M. Kubin, M. Timm, B. von Issendorff, **V. Zamudio-Bayer**, J. T. Lau, S. Faraji, T. Schlathölter, *Site-selective soft X-ray absorption as a tool to study protonation and electronic structure of gas-phase DNA*
Phys. Chem. Chem. Phys. 23, 11900 (2021).
29. S. Dörner, L. Schwob, K. Atak, K. Schubert, R. Boll, T. Schlathölter, M. Timm, C. Bülow, **V. Zamudio-Bayer**, B. von Issendorff, J. T. Lau, S. Techert, and S. Bari, *Probing structural information of gas-phase peptides by near-edge X-ray absorption mass spectrometry*
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28. K. Schubert, M. Guo, K. Atak, S. Dörner, C. Bülow, B. von Issendorff, S. Klumpp, J. T. Lau, P.S. Miedema, T. Schlathölter, S. Techert, M. Timm, X. Wang, **V. Zamudio-Bayer**, L. Schwob, and S. Bari, *The electronic structure and deexcitation pathways of an isolated metalloporphyrin ion resolved by metal L-edge spectroscopy*
Chem. Sci. 12, 3966 (2021).
27. R. C. Couto, L. Kjellsson, H. Ågren, V. Carravetta, S. L. Sorensen, M. Kubin, C. Bülow, M. Timm, **V. Zamudio-Bayer**, B. von Issendorff, J. T. Lau, J. Söderström, J. -E. Rubensson, and R. Lindblad, *The carbon and oxygen K-edge NEXAFS spectra of CO⁺*
Phys. Chem. Chem. Phys. 22, 16215 (2020).

26. R. Lindblad, L. Kjellsson, R. C. Couto, M. Timm, C. Bülow, **V. Zamudio-Bayer**, M. Lundberg, B. von Issendorff, J. T. Lau, S. L. Sorensen, V. Carravetta, H. Ågren, and J. -E. Rubensson, *X-ray Absorption Spectrum of the N_2^+ Molecular Ion* Phys. Rev. Lett. 124, 203001 (2020).
25. L. Schwob, S. Dörner, K. Atak, K. Schubert, M. Timm, C. Bülow, **V. Zamudio-Bayer**, B. von Issendorff, J. T. Lau, S. Techert, and S. Bari, *Site-Selective Dissociation upon Sulfur L-Edge X-ray Absorption in a Gas-Phase Protonated Peptide* J. Phys. Chem. Lett. 11, 1215 (2020).
24. M. Walter, M. Vogel, **V. Zamudio-Bayer**, R. Lindblad, T. Reichenbach, K. Hirsch, A. Langenberg, J. Rittmann, A. Kulesza, R. Mitrić, M. Moseler, T. Möller, B. von Issendorff, and J. T. Lau, *Experimental and Theoretical 2p Core-Level Spectra of Size-Selected Gas-Phase Aluminum and Silicon Cluster Cations: Chemical Shifts, Geometric Structure, and Coordination-Dependent Screening* Phys. Chem. Chem. Phys. 21, 6651 (2019).
23. **V. Zamudio-Bayer**, K. Hirsch, A. Langenberg, A. Lawicki, A. Terasaki, B. von Issendorff, and J. T. Lau, *Large orbital magnetic moments in small, free cobalt cluster ions Co_n^+ with $n \leq 9$* J. Phys.: Condens. Matter 30, 464002 (2018).
22. D. Egorov, S. Bari, R. Boll, S. Dörner, S. Deinert, S. Techert, R. Hoekstra, **V. Zamudio-Bayer**, R. Lindblad, C. Bülow, M. Timm, B. von Issendorff, J. T. Lau, and T. Schlathölter, *Near-edge soft X-ray absorption mass spectrometry of protonated melittin* J. Am. Soc. Mass Spectrom. 148, 194302 (2018).
21. S. C. Meier, A. Holz, J. Kulenkampff, A. Schmidt, D. Kratzert, D. Himmel, D. Schmitz, E. -W. Scheidt, W. Scherer, C. Bülow, M. Timm, R. Lindblad, S. T. Akin, **V. Zamudio-Bayer**, B. von Issendorff M. A. Duncan, J. T. Lau, and I. Krossing, *Access to the Bis-benzene Cobalt(I) Sandwich Cation and its Derivatives: Synthons for a “Naked” Cobalt(I) Source?* Angew. Chem. Int. Ed. 57, 9310 (2018).

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18. S. T. Akin, **V. Zamudio-Bayer**, K. Duanmu, G. Leistner, K. Hirsch, C. Bülow, A. Lawicki, A. Terasaki, B. von Issendorff, D. G. Truhlar, J. T. Lau, and M. A. Duncan, *Size-dependent ligand quenching of ferromagnetism in Co₃(benzene)_n⁺ clusters studied with XMCD spectroscopy* J. Phys. Chem. Lett. 7, 4568 (2016).
17. **V. Zamudio-Bayer**, K. Hirsch, A. Langenberg, A. Lawicki, A. Terasaki, B. von Issendorff, and J. T. Lau, *Electronic ground states of Fe₂⁺ and Co₂⁺ as determined by x-ray absorption and x-ray magnetic circular dichroism spectroscopy* J. Chem. Phys. 143, 244318 (2015).
16. **V. Zamudio-Bayer**, K. Hirsch, A. Langenberg, M. Kossick, A. Lawicki, A. Terasaki, B. von Issendorff, and J. T. Lau, *Direct observation of high-spin states in manganese dimer and trimer cations by x-ray magnetic circular dichroism spectroscopy in an ion trap* J. Chem. Phys. 142, 234301 (2015).
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12. K. Hirsch, **V. Zamudio-Bayer**, A. Langenberg, M. Niemeyer, B. Langbehn, T. Möller, A. Terasaki, B. von Issendorff, and J. T. Lau, *Magnetic moments of chromium-doped gold clusters: The Anderson impurity model in finite systems*
Phys. Rev. Lett. 114, 087202 (2015).
11. A. Langenberg, K. Hirsch, A. Lawicki, **V. Zamudio-Bayer**, M. Niemeyer, P. Chmiela, B. Langbehn, A. Terasaki, B. von Issendorff, and J. T. Lau, *Spin and orbital magnetic moments of size-selected iron, cobalt, and nickel clusters and their link to the bulk phase diagrams*
Phys. Rev. B 90, 184420 (2014).
10. **V. Zamudio-Bayer**, L. Leppert, K. Hirsch, A. Langenberg, J. Rittmann, M. Kossick, M. Vogel, R. Richter, A. Terasaki, T. Möller, B. von Issendorff, S. Kümmel, and J. T. Lau, *Coordination-driven magnetic-to-nonmagnetic transition in manganese doped silicon clusters*
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9. K. Hirsch, **V. Zamudio-Bayer**, J. Rittmann, A. Langenberg, M. Vogel, T. Möller, B. von Issendorff, and J. T. Lau, *Initial- and final-state effects on screening and branching ratio in 2p x-ray absorption of size-selected free 3d transition metal clusters*
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Phys. Rev. A 85, 062501 (2012).
7. M. Vogel, C. Kasigkeit, K. Hirsch, A. Langenberg, J. Rittmann **V. Zamudio-Bayer**, A. Kulesza, R. Mitrić, T. Möller, B. von Issendorff, and J. T. Lau, *2p core-level binding energies of size-selected free silicon clusters: Chemical shifts and cluster structure*
Phys. Rev. B 85, 195454 (2012).

6. M. Niemeyer, K. Hirsch, **V. Zamudio-Bayer**, A. Langenberg, M. Vogel, M. Kossick, C. Ebrecht, K. Egashira, A. Terasaki, T. Möller, B. von Issendorff, and J. T. Lau, *Spin coupling and orbital angular momentum quenching in free iron clusters*
Phys. Rev. Lett. 108, 057201 (2012).
5. J. T. Lau, M. Vogel, A. Langenberg, K. Hirsch, J. Rittmann **V. Zamudio-Bayer**, T. Möller, and B. von Issendorff, *Communication: Highest occupied molecular orbital-lowest unoccupied molecular orbital gaps of doped silicon clusters from core level spectroscopy*
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4. K. Hirsch, J. T. Lau, Ph. Klar, A. Langenberg, J. Probst, J. Rittmann, M. Vogel, **V. Zamudio-Bayer**, T. Möller, and B. von Issendorff, *X-ray spectroscopy on size-selected clusters in an ion trap: from the molecular limit to bulk properties*
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3. J. T. Lau, K. Hirsch, A. Langenberg, J. Probst, R. Richter, J. Rittmann, M. Vogel, **V. Zamudio-Bayer**, T. Möller, and B. von Issendorff, *Localized high spin states in transition-metal dimers: X-ray absorption spectroscopy study*
Phys. Rev. B 79, 241102(R) (2009).
2. J. T. Lau, K. Hirsch, P. Klar, A. Langenberg, F. Lofink, R. Richter, J. Rittmann, M. Vogel, **V. Zamudio-Bayer**, T. Möller, and B. von Issendorff, *X-ray spectroscopy reveals high symmetry and electronic shell structure of transition-metal-doped silicon clusters*
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