

Publication List

40. Rossi, T.C., Dykstra, C.R., Haddock, T.N., Wallick, R., Burke, J.H., Gentle, C.M., Doumy, G., March, A.-M., **van der Veen, R.M.**: "Charge Carrier Screening in Photoexcited Epitaxial Semiconductor Nanorods Revealed by Transient X-ray Absorption Linear Dichroism", *submitted*, preprint 10.33774/chemrxiv-2021-xm2lj (2021)
39. Zandi, O., **van der Veen, R.M.**: "Coulomb Explosion Dynamics of Spherical, Cylindrical and Ellipsoidal Charge Distributions", *submitted*, preprint arXiv:2003.00611 (2021)
38. Zandi O, **van der Veen, R.M.**, Duxbury, P.M., Zerbe, B.: "Magnetic Phase Transitions in Non-equilibrium Confined Plasmas", *submitted*, preprint arXiv:2106.04790 (2021)
37. Zandi, O., Sykes, A., Cornelius, R.D., Alcorn, F.M., Zerbe, B., Duxbury, P.M., Reed, B.W., **van der Veen, R.M.**: "Transient lensing from a photoemitted electron gas imaged by ultrafast electron microscopy", *Nat. Commun.* **11**, 3001 (2020)
36. Gentle, C.M., Wang, Y., Haddock, T.H., Dykstra, C.P., **van der Veen, R.M.**: "Internal atomic-scale structure determination and band alignment of II-VI quantum dot heterostructures", *J. Phys. Chem. C*, **124**, 6, 3895-3904 (2020) (**ACS Editors' Choice**)
35. Pomarico, E., Kim, Y.-J., Garcia de Abajo, F.J., Kwon, O.-H., Carbone, F., **van der Veen, R.M.**: "Ultrafast Electron Energy-Loss Spectroscopy in Transmission Electron Microscopy", *MRS Bulletin*, **43**(7), 497 (2018)
34. Park, S-T., and **van der Veen, R.M.**: "Modeling nonequilibrium dynamics of phase transitions at the nanoscale: Application to spin-crossover", *Structural Dynamics*, **4**(4), 044028 (2017)
33. **van der Veen, R.M.**, and Zewail, A.H.: "Ultrafast core-loss spectroscopy - Probing structural dynamics in nanomaterials on ultrafast time scales", *Imaging & Microscopy*, **17**(4), 28 (2015) (**invited article**)
32. **van der Veen, R.M.**, Penfold, T.J., and Zewail, A.H.: "Ultrafast Core-Loss Spectroscopy in 4D Electron Microscopy", *Structural Dynamics*, **2**, 024302 (2015)
31. Vanacore, G.M., **van der Veen, R.M.**, and Zewail, A.H.: "Origin of Axial and Radial Expansions in Carbon Nanotubes Revealed by Ultrafast Diffraction and Spectroscopy", *ACS Nano*, **9**(2), 17211729 (2015)
30. Lima, F.A., Penfold, T.J., **van der Veen, R.M.**, Reinhard, M., Abela, R., Tavernelli, I., Rothlisberger, U., Benfatto, M., Milne, C.J., and Chergui, M.: "Probing the electronic and geometric structure of ferric and ferrous myoglobins in physiological solutions by Fe K-edge absorption spectroscopy", *Phys. Chem. Chem. Phys.*, **16**, 1617-1631 (2014)
29. Zális, S., Milne, C.J., El Nahhas, A., Blanco-Rodríguez, A.M., **van der Veen, R.M.**, and Vlček Jr., A.: "Re and Br X-ray absorption near-edge structure study of the ground and excited states of [ReBr(CO)₃(bpy)] interpreted by DFT and TD-DFT calculations", *Inorg. Chem.*, **52**, 57755785 (2013)
28. **van der Veen, R.M.**, O-H. Kwon, Tissot, A., Hauser, A., and Zewail, A.H.: "Single-nanoparticle phase transitions visualized by four-dimensional electron microscopy", *Nature Chem.*, **5**, 395-402 (2013)
27. **van der Veen, R.M.**, Tissot, A., Hauser, A., and Zewail, A.H.: "Unusual molecular material formed through irreversible transformation and revealed by 4D electron microscopy", *Phys. Chem. Chem. Phys.*, **15**, 7831-7838 (2013)
26. El Nahhas, A., **van der Veen, R.M.**, Penfold, T.J., Pham, V.-T., Lima, F.A., Abela, R., Blanco-Rodríguez, A.M., Zális, S., Vlček, A., Tavernelli, I., U. Rothlisberger, Milne, C.J., and Chergui, M.: "X-ray absorption spectroscopy of ground and excited rhenium-carbonyl-diimine complexes: Evidence for a two-center

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25. Yurtsever, A., **van der Veen, R.M.**, and Zewail, A.H.: "Sub-particle ultrafast spectrum imaging in electron microscopy",
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 24. Herzog, M., Leitenberger, W., Shayduk, R., **van der Veen, R.M.**, Milne, C.J., Johnson, S.L., Vrejoiu, I., and Bargheer, M.: "Tailoring interference and nonlinear manipulation of femtosecond X-rays",
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 23. Consani, C., Braem, O., Oskouei, A.A., **van der Veen, R.M.**, El Nahhas, A., Cannizzo, A., Aubock, G., van Mourik, F., and Chergui, M.: "Ultrafast (bio)physical and (bio)chemical dynamics",
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 20. Lima, F.A., Milne, C.J., Amarasinghe, D.C.V., Rittmann-Frank, H.M., **van der Veen, R.M.**, Reinhard, M., Grolimund, D., Borca, C.N., Huthwelker, T., Janousch, M., Abela, R., van Mourik, F., and Chergui, M.: "A high-repetition rate scheme for picosecond laser pump/x-ray probe experiments at synchrotrons",
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 19. **van der Veen, R.M.**, Cannizzo, A., van Mourik, F., Vlček Jr., A., and Chergui, M.: "Vibrational wavepacket dynamics and intersystem crossing in binuclear metal complexes in solution",
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 18. Herzog, M., Shayduk, R., Leitenberger, W., **van der Veen, R.M.**, Johnson, S., Milne, Ch., Vrejoiu, I., Alexe, M., Hesse, D., and Bargheer, M.: "Ultrafast manipulation of hard X-rays by efficient Bragg switches",
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 14. Gawelda, W., Pham, V.-T., **van der Veen, R.M.**, Grolimund, D., Abela, R., Chergui, M., and Bressler, C.: "Structural analysis of ultrafast EXAFS with sub-picometer spatial resolution: application to solvated spin cross-over complexes",
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 13. Bressler, C., Milne, C.J., Pham, V.-T., El Nahhas, A., **van der Veen, R.M.**, Johnson, S.L., Beaud, P., Hauser, A., Grolimund, D., and Chergui, M.: "Femtosecond XANES of the photocycle of Iron(II) Molecular complexes",
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11. Gawelda, W., Cannizzo, A., Pham, V.-T., El Nahhas, A., Milne, C.J., **van der Veen, R.M.**, Bressler, C., and Chergui, M.: "Light-induced spin crossover probed by ultrafast optical and X-ray spectroscopies", *Chimia*, **61**(4), 179 (2007) (*invited article*)
10. Wörner, H.-J., **van der Veen, R.**, and Merkt, F.: "Jahn-Teller effect in the methane cation: rovibronic structure and the geometric phase", *Phys. Rev. Lett.*, **97**, 173003 (2006)

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9. Lima, F.A., Milne, C.J., Rittmann-Frank, H.M., **van der Veen, R.M.**, Reinhard, M., Penfold, T., Benfatto, M., and Chergui, M.: "X-ray absorption studies of the photo-induced structural changes of myoglobin in physiological"
Research in Optical Sciences, OSA Technical Digest (Optical Society of America, 2012), paper IW2D.6. (2012)
8. Milne, C.J., Pham, V.-T., Penfold, T., **van der Veen, R.M.**, Lima, F.A., El Nahhas, A., Johnson, S.L., Beaud, P., Abela, R., Bressler, C., Tavernelli, I., and Chergui, M.: "Probing the transition from hydrophilic to hydrophobic solvation with atomic scale resolution"
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7. Reinhard, M., Lima, F.A., El Nahhas, A., Milne, C., Pham, V.-T., **van der Veen, R.**, Amarasinghe, D.C.V., Johnson, S.L., Beaud, P., Grolimund, D., Borca, C.N., Abela, R., Ingold, G., Bressler, C., and Chergui, M.: "Solvation dynamics using ultrafast X-ray absorption spectroscopy"
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4. Milne, C., Johnson, S., Pham, V.-T., El Nahhas, A., **van der Veen, R.**, Beaud, P., Bressler, C., and Chergui, M.: "Sub-picosecond intersystem crossings and structural dynamics: Combined ultrafast optical and X-ray absorption studies"
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