

Peer-reviewed Articles

Works are reported in chronological order.

- O. Cannelli, N. Colonna, M. Puppini, T. Rossi, D. Kinschel, L. Leroy, J. Löffler, A. M. March, G. Doumy, A. Al Haddad, M.-F. Tu, Y. Kumagai, D. Walko, G. Smolentsev, F. Krieg, S. C. Boehme, M. V. Kovalenko, M. Chergui, **G. F. Mancini**, "Quantifying Photoinduced Polaronic Distortions in Inorganic Lead Halide Perovskites Nanocrystals", *J. Am. Chem. Soc.* (2021) - *Accepted*.
- J. R. Rouxel, D. Fainozzi, R. Mankowsky, B. Rösner, G. Seniutinas, R. Mincigrucci, S. Catalini, L. Foglia, R. Cucini, F. Döring, A. Kubec, F. Koch, F. Bencivenga, A. Al Haddad, A. Gessini, A. A. Maznev, C. Cirelli, S. Gerber, B. Pedrini, **G. F. Mancini**, E. Razzoli, M. Burian, H. Ueda, G. Pamfilidis, E. Ferrari, Y. Deng, A. Mozzanica, P. J. M. Johnson, D. Ozerov, M. G. Izzo, C. Bottari, C. Arrell, E. J. Divall, Serhane Zerdane, M. Sander, G. Knopp, P. Beaud, H. T. Lemke, C. J. Milne, C. David, R. Torre, M. Chergui, K. A. Nelson, C. Masciovecchio, U. Staub, L. Patthey, C. Svetina, Hard X-ray transient grating spectroscopy on bismuth germanate, **Nat. Photonics** (2021). <https://doi.org/10.1038/s41566-021-00797-9>
- C. Bacellar, D. Kinschel, O. Cannelli, B. Sorokin, T. Katayama, **G. F. Mancini**, J. R. Rouxel, Y. Obara, J. Nishitani, H. Ito, T. Ito, N. Kurahashi, C. Higashimura, S. Kudo, C. Cirelli, G. Knopp, K. Nass, P. J. M. Johnson, A. Wach, J. Szlachetko, F. A. Lima, C. J. Milne, M. Yabashi, T. Suzuki, K. Misawa, M. Chergui, "Femtosecond X-ray spectroscopy of haem proteins", **Faraday Discuss.**, Advance Article (2021). <https://doi.org/10.1039/D0FD00131G>
- C. Mariette*, M. Lorenc*, H. Cailleau, E. Collet, L. Guérin, A. Volte, E. Trzop, M. Levantino, M. Wulff, O. Hernandez, E. Janod, L. Cairo, V Taphouc, S-I Ohkoshi, H. Tokoro, P. Beaud, V. Esposito, Y Deng, G. Ingold, **G. F. Mancini**, R. Mankowsky, C. Svetina, S. Zerdane, A. Mozzanica, M. Chergui, H. Lemke, M. Cammarata, "Strain Wave Pathway to Semiconductor-to-Metal Transition revealed by time resolved X-ray powder diffraction and Quantitative Structural Analysis.", **Nat. Commun.** **12**, 1239 (2021).
- E. Prat, E. Prat, R. Abela, M. Aiba, A. Alarcon, J. Alex, Y. Arbelo, C. Arrell, V. Arsov, C. Bacellar, C. Beard, P. Beaud, S. Bettoni, R. Biffiger, M. Bopp, H.-H. Braun, M. Calvi, T. Celcer, M. Chergui, C. Cirelli, A. Citterio, P. Craievich, M. Csatar, Divall, A. Dax, M. Dehler, Y. Deng, A. Dietrich, P. Dijkstal, R. Dinapoli, S. Dordevic, D. Engeler, C. Erny, V. Esposito, E. Ferrari, U. Flechsig, R. Follath, F. Frei, R. Ganter, T. Garvey, Z. Geng, A. Gobbo, C. Gough, Andreas Hauff, C. P. Hauri, N. Hiller, S. Hunziker, M. Huppert, G. Ingold, R. Ischebeck, P. J. M. Johnson, S. L. Johnson, P. Juranic, M. Jurcevic, M. Kaiser, R. Kalt, B. Keil, D. Kiselev, C. Kittel, G. Knopp, W. Koprek, H. T. Lemke, D. Llorente Sancho, F. Löhl, A. Malyzhenkov, **G. F. Mancini**, R. Mankowsky, F. Märki, F. Marcellini, I. Martiel, C. J. Milne, A. Mozzanica, K. Nass, G. Orlandi, C. Ozkan Loch, M. Paraliev, B. Patterson, L. Patthey, B. Pedrini, M. Pedrozzi, C. Pradervand, P. Radi, J.-Y. Raguin, S. Redford, J. Rehanek, S. Reiche, L. Rivkin, A. Romann, L. Sala, M. Sander, T. Schietinger, T. Schilcher, V. Schlott, T. Schmidt, M. Seidel, M. Stadler, L. Stingelin, C. Svetina, D. M. Treyer, A. Trisorio, C. Vicario, D. Voulot, S. Zerdane, and E. Zimoch, "A compact and cost-effective hard X-ray free-electron laser driven by a high-brightness and low-energy electron beam", **Nat. Photonics** **14**, 748-754 (2020).
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- G. Smolentsev, C. J. Milne, A. Guda, K. Haldrup, J. Szlachetko, N. Azzaroli, C. Cirelli, G. Knopp, R. Bohinc, S. Menzi, G. Pamfilidis, D. Gashi, M. Beck, A. Mozzanica, D. James, C. Bacellar, **G. F. Mancini**, A. Tereshchenko,

- V. Shapovalov, W. M. Kwiątek, J. Czapla-Masztafiak, A. Cannizzo, M. Gazzetto, M. Sander, M. Levantino, V. Kabanova, E. Rychagova, S. Ketkov, M. Olaru, J. Beckmann, M. Vogt, "Taking a snapshot of the Triplet Excited State of an OLED Organometallic Luminophore using X-rays", **Nat. Commun.** **11**, 2131 (2020).
- T. C. Rossi, D. Grolimund, O. Cannelli, **G. F. Mancini**, C. Bacellar, D. Kinschel, J. R. Rouxel, N. Ohannessian, D. Pergolesi and M. Chergui, "X-ray absorption linear dichroism at the Ti K-edge of rutile (001) TiO₂ single crystal", **J. Synchrotron Radiat.** **27**, 425-435 (2020).
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 - **G. F. Mancini**, F. Pennacchio, T. Latychevskaia, J. Reguera, F. Stellacci, and F. Carbone, "Local photo-mechanical stiffness revealed in gold nanoparticles supracrystals by ultrafast small-angle electron diffraction", **Struct. Dyn.** **6**, 024304 (2019). Editor's Highlight
 - C. Svetina, R. Mankowsky, G. Knopp, F. Koch, G. Seniutinas, B. Rösner, A. Kubec, M. Lebugle, I. Mochi, M. Beck, C. Cirelli, J. Krempasky, C. Pradervand, J. Rouxel, **G. F. Mancini**, S. Zerdane, B. Pedrini, V. Esposito, G. Ingold, U. Wagner, U. Flechsig, R. Follath, M. Chergui, C. Milne, H.T. Lemke, C. David and P. Beaud, "Towards X-ray transient grating spectroscopy", **Opt. Lett.** **44**, 574-577 (2019).
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 - R. Karl, Jr.*, **G. F. Mancini***, J. L. Knobloch, T. Frazer, J. Hernandez-Charpak, B. Abad Mayor, D. Gardner, E. Shanblatt, M. Tanksalvala, C. Porter, C. Bevis, H. Kapteyn, D. Adams, M. Murnane, "Full-Field Imaging of Thermal and Acoustic Dynamics in an Individual Nanostructure using Tabletop High Harmonic Beams", **Sci. Adv.** **4**, eaau4295 (2018). Equally contributing and corresponding authors, with names in alphabetic order.
 - **G. F. Mancini**, R. M. Karl Jr., E. Shanblatt, C. Bevis, D. Gardner, M. Tanksalvala, J. Russell, D. E. Adams, H. C. Kapteyn, J. V. Badding, T. E. Mallouk, M. M. Murnane, "Colloidal Crystal Order and Structure Revealed by Tabletop Extreme Ultraviolet Scattering and Coherent Diffractive Imaging", **Opt. Express** **26**, pp. 11393-11406 (2018).
 - C. S. Bevis, R. M. Karl Jr., J. Reichenadter, D. F. Gardner, C. Porter, E. Shanblatt, M. Tanksalvala, **G. F. Mancini**, M. M. Murnane, H. C. Kapteyn, D. E. Adams, "Multiple beam ptychography for large field-of-view, high throughput, quantitative phase contrast imaging", **Ultramicroscopy** **184**, 164-171 (2018).
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 - M. Tanksalvala, C. L. Porter, M. Gerrity, G. P. Miley, X. Zhang, C. S. Bevis, E. R. Shanblatt, R. Karl, **G. F. Mancini**, D. A. Adams, H. C. Kapteyn, M. M. Murnane, "Wide Field-of-View Reflection-Mode Ptychographic Imaging Microscope with Tabletop 12.7 nm High Harmonic Illumination", **Microscopy and Microanalysis** **23**, 36-37 (2017).
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- T. Latychevskaia, **G. F. Mancini** and F. Carbone, "The role of the coherence in the cross-correlation analysis of diffraction patterns from two-dimensional dense mono-disperse systems", **Sci. Rep.** **5**, 16573 (2015).
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- **G. F. Mancini**, B. Mansart, S. Pagano, B. van der Geer, M. de Loos, and F. Carbone, "Design and implementation of a flexible beamline for fs electron diffraction experiments", **Nucl. Instrum. Methods Phys. Res. A** **691**, 113-122 (2012).
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Acknowledged contributions

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Invited Articles

- **G. F. Mancini**, D. A. Adams, "Ultrafast functional Nano-imaging and coherent scattering with EUV pulsed light sources" *Journal of Optics - focus issue on Femtosecond and Ultrafast Laser Spectroscopy and Imaging* (2021).
- **G. F. Mancini**, D. A. Adams, T. Lagrange, F. Carbone, "Correlative X-ray and electron imaging in the ultrafast domain: novel approaches to probe functionality of surfaces and interfaces" in *Surface Science Reports* (2021).

Articles in Review

- J. R. L. Mardegan*, S. Zerdane*, **G. F. Mancini**, V. Esposito, J. Rouxel, R. Mankowsky, C. Svetina, N. Gurung, S. Parchenko, M. Porer, B. Burganov, Y. Deng, P. Beaud, G. Ingold, B. Pedrini, C. Arrell, C. Erny, A. Dax, H. Lemke, M. Decker, N. Ortiz, C. Milne, M. Nachtegaal, G. Smolentsev, L. Maurel, V. Scagnoli, S. L. Johnson, M. Chergui, A. Mitsuda, H. Wada, H. Wadati, U. Staub, “Ultrafast electron localization in a correlated metal”, *Submitted to Phys. Rev. X* (2021).

Patents

- M. Tanksalvala, D. Adams, D. Gardner, C. Porter, **G. F. Mancini**, H. C. Kapteyn, M. M. Murnane: Modulus-Enforced Probe. US Patent App. 16/302,911.
- C. Porter, E. Shanblatt, D. Adams, M. Tanksalvala, D. Gardner, **G. F. Mancini**, H. C. Kapteyn, M. M. Murnane: EUV and Soft X-ray Coherent Spatially resolved Complex Reflectometry/Refractometry. App. no.: 62/338,961.

Peer-reviewed Conference Proceedings

All publications reported in this section have undergone **peer-review** screening and are published in the form of **conference proceedings**. The “SPIE Advanced Lithography 2018” and “Computational Optical Sensing and Imaging at the 2016 Imaging and Applied Optics Congress” recognized the presented scientific results with **awards for best paper**.

- **G. F. Mancini**, R. Karl Jr., E. Shanblatt, C. Bevis, D. Gardner, M. Tanksalvala, J. Russell, D. Adams, H. Kapteyn, J. Badding, T. Mallouk, M. Murnane, “Tabletop EUV Coherent Diffractive Imaging and Small Angle Scattering of Colloidal Crystals”, **International Conference on Ultrafast Phenomena 2018**. *EPJ Web Conf.* 205, 05015 (2019).
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- R. Karl, **G. F. Mancini**, D. Gardner, E. Shanblatt, J. Knobloch, T. Frazer, J. N. Hernandez-Charpak, B. Abad Mayor, M. Tanksalvala, C. Porter, C. Bevis, W. Chao, D. Adams, H. Kapteyn, M. Murnane, SPIE Advanced Lithography 2018 for the paper "Characterization and imaging of nanostructured materials using tabletop extreme ultraviolet light sources", **SPIE Advanced Lithography 2018**, Proc. SPIE 10585, Metrology, Inspection, and Process Control for Microlithography XXXII, *International Society for Optics and Photonics*, 105850N (13 March 2018); doi: 10.1117/12.2297223. Awarded the **Karl Urbanek Best Student Paper Award**.
- R. M. Karl, **G. F. Mancini**, D. Gardner, E. Shanblatt, J. Knobloch, T. Frazer, J. N. Hernandez-Charpak, B. Abad Mayor, M. Tanksalvala, C. Porter, D. Adams, H. Kapteyn, M. Murnane, “Full-Field Functional Imaging of Acoustic Waves Using Tabletop High Harmonics”, **Compact EUV & X-ray Light Sources 2018**. *Optical Society of America*, ET2B. 6 (2018).
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