Scientific Publications X-Ray Optics Group past 10 years

Last updated: January 2019

2019:

1. M. Makita, I. Vartiainen, I. Mohacsi, C. Caleman, A. Diaz, O. Jonsson, P. Juranic, N. Medvedev, A. Meents, A. Mozzanica, N. Opara, C. Padeste, V. Panneels, V. Saxena, M. Sikorski, S. Song, L. Vera, P. Willmott, P. Beaud, C. Milne, B. Ziaja-Motyka, and C. David
   X-ray induced non-thermal melting of Bismuth at femto-second time scales
   Scientific Reports **9** (2018) p. 602, https://doi.org/10.1038/s41598-018-36216-3

2. S. Gottlieb, B. Rösner, L. Evangelio, M. Fernández-Regúlez, A. Nogales, M.C. García-Gutiérrez, T.F. Keller, J. Fraxedas, T.A. Ezquerra, C. David, F. Perez-Murano
   Self-Assembly Morphology of Block Copolymers in Sub-10 nm Topographical Guiding Patterns
   Molecular Systems Design and Engineering (2019) DOI: 10.1039/c8me00046h

3. 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
   Toward X-ray Transient Grating Spectroscopy
   Optics Letters **44** (2019) p. 574 – 577

4. J. Crha, J. Vila-Comamala, E. Lehmann, C. David, P. Trtik
   Light Yield Enhancement of the 157-Gadolinium Oxysulfide Scintillator Screen for the High-Resolution Neutron Imaging
   MethodsX **6** (2019) p. 107 – 114, DOI: 10.1016/j.mex.2018.12.005

2018:

5. V. Lutz-Bueno, C. Arboleda, L. Leu, M.J. Blunt, A. Busch, A. Georgiadis, P. Bertier, J. Schmatz, Z. Varga, P. Villanueva-Perez, Z. Wang, M. Lebugle, C. David, M. Stampanoni, A. Diaz, M. Guizar-Sicairos and A. Menzel
   Model-free classification of X-ray scattering signals applied to image segmentation
   Journal of Applied Crystallography **51** (2018) p. 1 – 9

6. N. Opara, I. Mohacsi, M. Makita, D. Castano-Diez, A. Diaz, P. Juranic, M. Marsh, A. Meents, C. Milne, C. Padeste, V. Panneels, M. Sikorski, S. Song, H. Stahlberg, I. Vartiainen, L. Vera, M. Wang, P. Willmott, C. David
   Demonstration of femtosecond X-ray pump X-ray probe diffraction on protein crystals
   Structural Dynamics **5** (2018) p. 054303-9, DOI: 10.1063/1.5050618

7. J. Krempasky, F. Koch, A. Jaggi, C. Svetina, U. Flechsig, L. Patthey, S. Marathe, D. Battey, S. Cippicia, C. Rau, F. Seiboth, M. Seaberg, P. Vagovic, C. David, and U.H. Wagner,
   Inspecting adaptive optics with at-wavelength wavefront metrology
   Proceedings of the SPIE **10761** (2018) p. 107610D-1, https://doi.org/10.1117/12.2320532

8. A. Do, M. Briat, A. Challeig, C. Rubbelynck, M. Lebugle, C. David, P. Troussel
   Fabrication and resolution measurements of a double Fresnel zone plate optics
   Review of Scientific Instruments **89** (2018) p. 10G122, https://doi.org/10.1063/1.5039326

9. M. Lebugle, F. Dworkowski, A. Pauluhn, V.A. Guzenko, N. Meier, D. Ferreira Sanchez, D. Grolimund, M. Wang, C. David
   A high-intensity X-ray microbeam for macromolecular crystallography using silicon kinoform diffractive lenses
   Applied Optics **57** (2018) p. 9032 - 9039, https://doi.org/10.1364/AO.57.009032

10. P. Villanueva-Perez, B. Pedrini, R. Mokso, P. Vagovic, V.A. Guzenko, S.J. Leake, P.R. Willmott, P. Oberta, C. David, H.N. Chapman, M. Stampanoni
    Coherent hard X-ray multi-projection imaging for single-shot approaches
    Optica **5** (2018) p. 1521 – 1524

11. M. Kagias, Z. Wang, V.A. Guzenko, C. David, M. Stampanoni, K. Jefimovs
    Fabrication of Au gratings by seedless electroplating for X-ray grating interferometry
    Materials Science in Semiconductor Processing **92** (2018) p. 73 – 79, https://doi.org/10.1016/j.mssp.2018.04.015

12. G. Seniutinas, E. Brasselet, A. Balčytis, C. David, S. Juodkazis
    Diamond: A gem for micro-optics - Micro-optical elements for a variety of applications
    Materials Today **21** (2018) p. 798 – 799, doi: 10.1016/j.mattod.2018.08.001

13. S. Borrelli, G.L. Orlandi, M. Bednarzik, C. David, E. Ferrari, V.A. Guzenko, C. Ozkan-Loch, E. Prat, and R. Ischebeck
Generation and measurement of sub-micrometer relativistic electron beams
Nature Communications Physics **1** (2018) p. 52 – 8, DOI: 10.1038/s42005-018-0048-x

14. E. Ferrari, R. Ischebeck, M. Bednarzik, S. Bettoni, S. Borrelli, H.-H. Braun, M. Calvi, C. David, M. Dehler, F. Frei, T. Garvey, V.A. Guzenko, N. Hiller, P. Hommelhoff, J. McNeur, C. Ozkan-Loch, E. Prat, S. Reiche, A. Romann, B. Sarafinov, V. Schlott, L. Rivkin
The ACHIP experimental chambers at the Paul Scherrer Institut
Nuclear Instruments and Methods in Physics Research A **907** (2018) p. 244 – 247, https://doi.org/10.1016/j.nima.2018.02.112

15. P. Juranić, J. Rehanek, C. Pradervand, R. Ischebeck, C. Erny, P. Heimgartner, I. Gorgisyan, G. Seniutinas, C. David, C. Hauri and L. Patthey
SwissFEL Aramis Beamline Photon Diagnostics
Journal of Synchrotron Radiation **25** (2018) p. 238–1248

16. G. Seniutinas, A. Weber, C. Padeste, I. Sakellari, M. Farsari, and C. David
Beyond 100 nm Resolution in 3D Laser Lithography – Post Processing Solutions
Microelectronic Engineering **191** (2018) p. 25-31

17. B. Rösner, F. Koch, F. Döring, J. Bosgra, V.A. Guzenko, E. Kirk, M. Meyer, J.L. Ornelas, R.H. Fink, S. Swaraj, R. Belkhou, B. Watts, J. Raabe, C. David
Exploiting Atomic Layer Deposition for Fabricating Sub-10 nm X-ray Lenses
Microelectronic Engineering **191** (2018) p. 91–96

18. A. Cattoni, D. Mailly, O. Dalstein, M. Faustini, G. Seniutinas, B. Rösner, C. David
Sub-10 nm Electron and Helium Ion Beam Lithography Using a Recently Developed Alumina Resist
Microelectronic Engineering **193** (2018) p. 18–22

19. M. Graczyk, A. Cattoni, B. Rösner, G. Seniutinas, A. Kvennefors, A. Löfstrand, D. Mailly, C. David, I. Maximov
Nanoimprint Stamps with Ultra-High Resolution: Optimal Fabrication Techniques
Microelectronic Engineering **190** (2018) p. 73–78

20. M.P. Olbinado, J. Grenzer, A. Pelka, P. Pradel, T. De Resseguier, P. Vagovic, M.-C. Zdora, V.G. Guzenko, C. David, and A. Rack
Indirect detector systems for various single-bunch, full-field, hard X-ray imaging at beamline ID19 of the European Synchrotron
Journal of Instrumentation **13** (2018) p. C04004, DOI: 10.1088/1748-0221/13/04/C04004

21. P. Villanueva-Perez, B. Pedrini, R. Mokso, P. Vagovic, V.A. Guzenko, S. Leake, P.R. Willmott, C. David, H.N. Chapman, and M. Stampanoni,
Coherent Hard X-ray Multiprojection Imaging
Microscopy and Microanalysis **24** (2018) p. 50 – 51, doi:10.1017/S1431927618012680

22. S. Flenner, E. Larsson, K. Furlan, D. Laipple, M. Storm, F. Wilde, R. Blick, G.A. Schneider, R. Zierold, R. Janssen, C. David, F. Beckmann, M. Müller and I. Greving
Nanotomography of Inverse Photonic Crystals Using Zernike Phase Contrast
Microscopy and Microanalysis **24** (2018) p. 146 – 147, doi:10.1017/S1431927618013120

23. F. Döring, F. Marschall, Z. Yin, B. Rösner, M. Beye, P. Miedema, K. Kubiček, L. Glaser, D. Raiser, J. Soltau, V.A. Guzenko, J. Viefhaus, J. Buck, M. Risch, S. Techert and C. David
1D-Full Field Microscopy of Elastic and Inelastic Scattering with Transmission off-axis Fresnel Zone Plates
Microscopy and Microanalysis **24** (2018) p. 182 – 183, doi:10.1017/S1431927618013260

24. A. Schropp, D. Brückner, J. Bulda, G. Falkenberg, J. Garrevoet, F. Seiboth, F. Wittwer, F. Koch, C. David, and C.G. Schroer
Scanning Hard X-Ray Microscopy Based on Be CRLs
Microscopy and Microanalysis **24** (2018) p. 186 – 187, doi:10.1017/S1431927618013284

25. M. Storm, S. Cipiccia, S. Marathe, V.S.C. Kuppili, F. Döring, C. David and C. Rau
The Diamond I13-2 Transmission X-ray Microscope: Current Status and Future Developments
Microscopy and Microanalysis **24** (2018) p. 216 – 218, doi:10.1017/S1431927618013430

26. I. Greving, S. Flenner, E. Larsson, M. Storm, F. Wilde, E. Lilleodden, T. Dose, H. Burmester, L. Lottermoser, C. David and F. Beckmann
Full-Field Hard X-Ray Microscope Designed for Materials Science Applications
Microscopy and Microanalysis **24** (2018) p. 226 – 227, doi:10.1017/S143192761801348X

27. M. Scheel, J. Perrin, F. Koch, V. Yurgens, V. Le Roux, J.-L. Giorgetta, K. Desjardins, C. Menneglier, S. Zhang, C. Engblom, Y.-M. Abiven, G. Cauchon, C. Bourgoin, A. Lestrade, T. Moreno, F. Polack, C. David and T. Weitkamp
Toward Hard X-ray Transmission Microscopy at the ANATOMIX Beamline of Synchrotron SOLEIL
Microscopy and Microanalysis **24** (2018) p. 246 – 247, doi:10.1017/S1431927618013582

28. C. David, B. Rösner, F. Döring, V.A. Guzenko, F. Koch, M. Lebugle, F. Marschall, G. Seniutinas, J. Raabe, B. Watts, D. Grolimund, Z. Yin, M. Beye, S. Techert, J. Viefhaus, G. Falkenberg, C. Schroer
Diffractive X-ray Optics for Synchrotrons and Free-Electron Lasers
Microscopy and Microanalysis **24** (2018) p. 264 – 267, doi:10.1017/S1431927618013673

29. B. Rösner, F. Koch, F. Döring, V.A. Guzenko, M. Meyer, J.L. Ornelas, A. Späth, R.H. Fink, S. Stanescu, S. Swaraj, R. Belkhou, B. Watts, J. Raabe, C. David
7 nm Spatial Resolution in Soft X-ray Microscopy
Microscopy and Microanalysis **24** (2018) p. 270 – 271, doi: 10.1017/S1431927618013697

30. P. R. Ribič, B. Rösner, D. Gauthier, F. Döring, C. Masciovecchio, E. Principi, C. David, G. De Ninno
Extreme-Ultraviolet Vortices at a Free-Electron Laser
Microscopy and Microanalysis **24** (2018) p. 292 – 293, doi: 10.1017/S1431927618013806

31. A. Bergamaschi, M. Andrä, R. Barten, M. Brückner, S. Chiriotti, C. David, R. Dinapoli, E. Fröjdh, D. Greiffenberg, M. Lebugle, C. Lopez-Cuenca, D. Mezza, A. Mozzanica, M. Ramilli, S. Redford, C. Ruder, B. Schmitt, X. Shi, D. Thattil, G. Tinti, S. Vetter, J. Zhang
Hybrid Detectors for High Resolution Imaging
Microscopy and Microanalysis **24** (2018) p. 316 – 318, doi:10.1017/S1431927618013910

32. J. Vila-Comamala, L. Romano, V.A. Guzenko, M. Kagias, M. Stampanoni, K. Jefimovs
Towards sub-micrometer high aspect ratio X-ray gratings by atomic layer deposition of iridium
Microelectronic Engineering **192** (2018), p.19-22, doi:10.1016/j.mee.2018.01.027

33. R. Fallica, B. Watts, B. Rösner, G. D. Giustina, L. Brigo, G. Brusatin, Y. Ekinci
NEXAFS study of chemical changes in hybrid organic-inorganic resists upon exposure
Nanotechnology 29, 2018, 36LT03 https://doi.org/10.1088/1361-6528/aaccd4

34. J. L. Ornelas, B. Rösner, A. Späth, R. H. Fink
STXM_deconv - a MATLAB Script for the Deconvolution of STXM Images
Microscopy and Microanalysis 24 (Suppl. 2), 2018, 120-121, https://doi.org/10.1017/S1431927618012990

35. R. H. Fink, B. Rösner, X. Du, A. Späth, M. Johnson, T. Hawly, B. Watts, J. Raabe, L. Gregoratti, M. Amati
In-operando soft X-ray microspectroscopy of organic electronic devices
Microscopy and Microanalysis 24 (Suppl. 2), 2018, 424-425, https://doi.org/10.1017/S143192761801437X

36. K. Bray , B. Regan, A. Trycz, R. Previdi, G. Seniutinas, K. Ganesan, M. Kianinia, S. Kim and I. Aharonovich
Single Crystal Diamond Membranes and Photonic Resonators Containing Germanium Vacancy Color Centers
ACS Photonics 5 (2018) p. 4817-4822, doi: 10.1021/acsphotonics.8b00930

2017:

37. M. Lebugle, G. Seniutinas, F. Marschall, V.A. Guzenko, D. Grolimund, and C. David
A tunable kinoform X ray beamsplitter
Optics Letters **42** (2017) p. 4327-4330

38. B. Rösner, F. Döring, P.R. Riberič, D. Gauthier, E. Principi, C. Masciovecchio, M. Zangrando, J. Vila-Comamala, G. De Ninno, and C. David
High Resolution Beam Profiling of X-ray Free Electron Laser Radiation by Polymer Imprint Development
Optics Express **25** (2017) p. 30686-30695

39. F. Marschall, Z. Yin, J. Rehanek, M. Beye, F. Döring, K. Kubicek, D. Raiser, S. Thekku Veedu, J. Buck, A. Rothkirch, B. Rösner, V.A. Guzenko, J. Viefhaus, C. David, and S. Techert
Transmission zone plates as analyzers for efficient RIXS-mapping
Scientific Reports **7** (2017) p. 8849-7, DOI: 10.1038/s41598-017-09052-0

40. P.R. Ribič, B. Rösner, D. Gauthier, E. Allaria, F. Döring, L. Foglia, L. Giannessi, N. Mahne, M. Manfredda, C. Masciovecchio, R. Mincigrucci, N. Mirian, E. Principi, E. Roussel, A. Simoncig, S. Spampinati, C. David, G. De Ninno
Extreme Ultraviolet Vortices from a Free Electron Laser
Physical Review X **7** (2017) p. 031036 – 9

41. M. Lebugle, M. Liebi, K. Wakonig, V. A. Guzenko, M. Holler, A. Menzel, M. Guizar-Sicairos, A. Diaz, and C. David
High-acceptance versatile microfocus module based on elliptical Fresnel zone plates for small angle X ray scattering
Optics Express **25** (2017) p. 21145-21158

42. F. Marschall, D. McNally, V.A. Guzenko, B. Rösner, M. Dantz, X. Lu, L. Nue, V. Strocov, T. Schmitt, and C. David
Zone plates as imaging analyzers for resonant inelastic x-ray scattering
Optics Express **25** (2017) p. 15624-9, DOI: 10.1364/OE.25.015624

43. I. Greving, M. Ogurreck, F. Marschall, A. Last, F. Wilde, T. Dose, H. Burmester, L. Lottermoser, M. Müller, C. David and F. Beckmann,
Nanotomography endstation at the P05 beamline: Status and perspectives
IOP Conf. Series: Journal of Physics: Conf. Series **849** (2017) p. 012056

44. M. Buzzi, M. Makita, L. Howald, A. Kleibert, B. Vodungbo, P. Maldonado, J. Raabe, N. Jaouen, H. Redlin, K. Tiedtke, P.M. Oppeneer, C. David, F. Nolting, J. Lüning
Single-shot Monitoring of Ultrafast Processes via X-ray Streaking at a Free Electron Laser
Scientific Reports **7** (2017) p. 7253, DOI: 10.1038/s41598-017-07069-z

45. N. Opara, S. Arnold, T. Braun, H. Stahlberg, M. Makita, C. David, and C. Padeste,
Direct protein crystallization on ultrathin membranes for diffraction measurements at X-ray free electron lasers
Journal of Applied Crystallography **50** (2017) p. 909-918, DOI: 10.1107/S1600576717005799

46. P. Roedig, H.M. Ginn, T. Pakendorf, G. Sutton, K. Harlos, T.S. Walter, J. Meyer, P. Fischer, R. Duman, I. Vartiainen, B. Reime, M. Warmer, A. Brewster, I.D. Young, T. Michels-Clark, N. Sauter, M. Sikorsky, S. Nelson, D.S. Damiani, R. Alonso-Mori, J. Ren., E.E. Fry, C. David, D.I. Stuart, A. Wagner, and A. Meents
High-speed fixed-target serial virus crystallography
Nature Methods **14** (2017) p. 805-813, DOI:10.1038/nmeth.4335

47. G. Seniutinas, A. Balcytis, I. Reklaitis, F. Chen, J. Davis, C. David, and S. Juodkazis
Tipping solutions: emerging 3D nano-fabrication/-imaging technologies
Nanophotonics **6** (2017) p. 923–941, DOI: 10.1515/nanoph-2017-0008

48. I. Mohacsi, I. Vartiainen, B. Rösner, M. Guizar-Sicairos, V.A. Guzenko, I. McNulty, R. Winarski, M.V. Holt, and C. David
Interlaced zone plate optics for practical hard X-ray imaging in the 10 nm range
Scientific Reports **7** (2017) p. 43624, DOI: 10.1038/srep43624

49. B. Pedrini, A. Menzel, V.A. Guzenko, C. David, R. Abela, C. Gutt
Model-independent particle species disentanglement by solution X-ray cross-correlation scattering
Scientific Reports **7** (2017) p. 45618, DOI: 10.1038/srep45618

50. J. Rehanek, M. Makita, P. Wiegand, P. Heimgartner, G. Seniutinas, U. Flechsig, V. Thominet, C. Schneider, A. Rodriguez Fernandez, C. David, L. Patthey and P. Juranić
The hard X-ray Photon Single-Shot Spectrometer of SwissFEL – initial characterization
Journal of Instrumentation **12** (2017) P05024, DOI:10.1088/1748-0221/12/05/P05024

51. M.-C. Zdora, J. Vila-Comamala, G. Schulz, A. Khimchenko, A. Hipp, A.C. Cook, D. Dilg, C. David, C. Grünzweig, C. Rau, P. Thibault, and I. Zanette
X-ray phase microtomography with a single grating for high-throughput investigations of biological tissue
Biomedical Optics Express **8** (2017) p. 1257-1270, https://doi.org/10.1364/BOE.8.001257

52. F. Marschall, J. Vila-Comamala, V.A. Guzenko, C. David
Systematic efficiency study of line-doubled ultra-high resolution zone plates
Microelectronic Engineering **177** (2017) p. 25-29

53. M. Makita, P. Karvinen, V.A. Guzenko, P. Vagovic, C. David
Diamond diffraction gratings for experiments with intense hard x-rays
Microelectronic Engineering **176** (2017) p. 75-78

54. Y. Kayser, C. David, U. Flechsig, J. Krempasky, V. Schlott and R. Abela
X-ray grating interferometer for in-situ and at-wavelength wavefront metrology
Journal of Synchrotron Radiation **24** (2017) p. 150-162

2016:

55. J. Szlachetko, J. Hoszowska, J.-Cl. Dousse, M. Nachtegaal, W. Błachucki, Y. Kayser, J. Sà, M. Messerschmidt, S. Boutet, G.J. Williams, C. David, G. Smolentsev, J.A. van Bokhoven, B.D. Patterson, T.J. Penfold, G. Knopp, M. Pajek, R. Abela, C.J. Milne
Establishing nonlinearity thresholds with ultraintense X-ray pulses
Scientific Reports **6** (2016) p. 33292

56. C.-S. Lee, Y.-Y. Lee, K.S.L. Chong, L. Wang, C. Dais, F. Clube, H.H. Solak, I. Mohacsi, C. David and R. Bischofberger
High-resolution, high-aspect-ratio iridium-nickel composite nanoimprint molds
Journal of Vacuum Science and Technology B **34** (2016) p. 061804-5

57. Y. Kayser, C. David, U. Flechsig, J. Krempasky, V. Schlott and R. Abela
X-ray grating interferometer for in-situ and at-wavelength wavefront metrology
Journal of Synchrotron Radiation **24** (2016) p. 1-13 https://doi.org/10.1107/S1600577516017562

58. L. Ahad, I. Vartiainen, T. Setälä, A.T. Friberg, C. David, M. Makita, and J. Turunen
On spectral and temporal coherence of X-ray free-electron laser beams
Optics Express **24** (2016) p. 13081-13090

59. P. Roedig, R. Duman, J. Sanchez-Weatherby, I. Vartiainen, A. Burkhardt, M. Warmer, C. David, A. Wagner, and A. Meents
Room-temperature macromolecular crystallography using a micro-patterned silicon chip with minimal background scattering
Journal of Applied Crystallography **49** (2016) p. 968-975

60. J. Vila-Comamala, J. Bosgra, D.S. Eastwood, U. Wagner, A.J. Bodey, M. Garcia-Fernandez, C. David, C. Rau,
Transmission x-ray microscopy at Diamond-Manchester I13 Imaging Branchline
AIP Conference Proceedings **1696** (2016) p. 020036-4

61. Y. Kayser, S. Rutishauser, T. Katayama, T. Kameshima, H. Ohashi, U. Flechsig, M. Yabashi, and C. David
Shot-to-shot diagnostic of the longitudinal photon source position at the SPring-8 Angstrom Compact Free Electron Laser by means of X-ray grating interferometry,
Optics Letters **41** (2016) p. 733-736

62. I. Vartiainen, I. Mohacsi, K. Stachnik, M. Guizar-Sicairos, C. David, and A. Meents
Zernike X-ray Ptychography
Optics Letters **41** (2016) p. 721-724

63. T. Katayama, S. Owada, T. Togashi, K. Ogawa, P. Karvinen, I. Vartiainen, A. Eronen, C. David, T. Sato, K. Nakajima, Y. Joti, H. Yumoto, H. Ohashi, and M. Yabashi
A Beam Branching Method for Advanced Single-shot Characterization of Hard X-ray Free-electron Lasers
Structural Dynamics **3** (2016) p. 034301-14

64. I. Mohacsi, I. Vartiainen, M. Guizar-Sicairos, P. Karvinen, V.A. Guzenko, E. Müller, C.M. Kewish, A. Somogyi and C. David
Fabrication and characterization of high efficiency double-sided blazed X-ray optics
Optics Letters **41** (2016) p. 281-284

65. K. Gajos, V.A. Guzenko, M. Dubner, J. Haberko, A. Budkowski, and C. Padeste
Electron-Beam Lithographic Grafting of Functional Polymer Structures from Fluoropolymer Substrates
Langmuir **32** (2016) p. 10641-10650

66. S. Pfirrmann, A. Voigt, A. Kolander, G. Grützner, O. Lohse, I. Harder, and V.A. Guzenko
Towards a novel positive tone resist mr-PosEBR for high resolution electron-beam lithography
Microelectronic Engineering **155** (2016) p. 67-73

67. R. Kirchner, V.A. Guzenko, I. Vartiainen, N. Chidambaram, and H. Schift
ZEP520A-A resist for electron-beam grayscale lithography and thermal reflow
Microelectronic Engineering **153** (2016) p. 71-76

68. S. Pfirrmann, R. Kirchner, O. Lohse, V.A. Guzenko, A. Voigt, I. Harder, A. Kolander, H. Schift, and G. Grützner
mr-PosEBR - A novel positive tone resist for high resolution electron beam lithography and 3D surface patterning
Proceedings of the SPIE **9779** (2016) p. 977925 doi: 10.1117/12.2219165

2015:

69. C. David, P. Karvinen, M. Sikorski, I. Vartiainen, S. Song, C.J. Milne, A. Mozzanica, Y. Kayser, A. Diaz, I. Mohacsi, G. Carini, S. Herrmann, E. Färm, M. Ritala, D.M. Fritz, and A. Robert
Following the dynamics of matter with femtosecond precision using the X-ray streaking method
Scientific Reports **5** (2015) p. 7644

70. I. Mohacsi, I. Vartiainen, M. Guizar-Sicairos, P. Karvinen, V.A. Guzenko, E. Müller, E. Färm, M. Ritala, C. Kewish, A. Somogyi, and C. David
Double-sided diffractive X-ray optics for hard X-ray microscopy
Optics Express **23** (2015) p. 776-786

71. I. Vartiainen, C. Holzner, I. Mohacsi, P. Karvinen, A. Diaz, and C. David
Artifact characterization and reduction in scanning X-ray Zernike phase contrast microscopy
Optics Express **23** (2015) p. 13278-13294

72. P. Roedig, I. Vartiainen, R. Duman, S. Panneerselvam, N. Stuebe, O. Lorbeer, M. Warmer, G. Sutton, D.H. Stuart, E. Weckert, C. David, A. Wagner, and A. Meents
A micro-patterned silicon chip as sample holder for macromolecular crystallography experiments with minimal background scattering
Scientific Reports **5** (2015) p. 10451

73. K. Stachnik, I. Mohacsi, I.Vartiainen, N. Stuebe, J. Meyer, M. Warmer, C. David, and A. Meents
Influence of finite spatial coherence on ptychographic reconstruction
Applied Physics Letters **107** (2015) p. 011105-5

74. P. Trtik, J. Hovind, C. Grünzweig, A. Bollhalder, V. Thominet, C. David, A. Kaestner, and E.H. Lehmann
Improving the spatial resolution of neutron imaging at Paul Scherrer Institut - The Neutron Microscope Project
Physics Procedia **69** (2015) p. 169-176

75. M. Makita, P. Karvinen, D. Zhu, P. Juranic, J. Grünert, S. Cartier, J.H. Jungmann-Smith, H.T. Lemke, A. Mozzanica, S. Nelson, L. Patthey, M. Sikorski, S. Song, Y. Feng, and C. David
High Resolution Single Shot Spectral Monitoring of Hard X-ray Free Electron Laser Radiation
Optica **2** (2015) p. 912-916

76. S.V. Roth, R. Döhrmann, R. Gehrke, R. Röhlsberger, K. Schlage, E. Metwalli, V. Körstgens, M. Burghammer, C. Riekel, C. David, and P. Müller-Buschbaum
Mapping the morphological changes of deposited gold nanoparticles across an imprinted groove
Journal of Applied Crystallography **48** (2015) p. 1-7

77. I. Manke, N. Kardjilov, R. Schäfer, A. Hilger, M. Strobl, M. Dawson, C. Grünzweig, G. Behr, M. Hentschel, C. David, A. Kupsch, A. Lange, J. Banhart,
Three-dimensional imaging of magnetic domains
Physics Procedia **69** (2015) p. 404-412

78. C. Donnelly, M. Guizar-Sicairos, V. Scagnoli, M. Holler, T. Huthwelker, A. Menzel, I. Vartiainen, E. Müller, E. Kirk, S. Gliga, J. Raabe, L.J. Heyderman,
Element-Specific X-Ray Phase Tomography of 3D Structures at the Nanoscale
Physical Review Letters **114** (2015) p. 115501

79. G. Fülöp, F. Dominguez, S. d'Hollosy, A. Baumgartner, P. Makk, M.H. Madsen, V.A. Guzenko, J. Nygard, C. Schönenberger, A.L. Yeyati, and S. Csonka
Magnetic Field Tuning and Quantum Interference in a Cooper Pair Splitter
Physical Review Letters **115** (2015) p. 227003

80. S. d'Hollosy, M. Jung, A. Baumgartner, V.A. Guzenko, M.H. Madsen, J. Nygard, C. Schönenberger
Gigahertz Quantized Charge Pumping in Bottom-Gate-Defined In As Nanowire Quantum Dots
Nano Letters **15** (2015) p. 4585-4590

81. R. Kirchner, V.A. Guzenko, M. Rohn, E. Sonntag, M. Mühlberger, I. Bergmair, H. Schift
Bio-inspired 3D funnel structures made by grayscale electron-beam patterning and selective topography equilibration
Microelectronic Engineering **141** (2015) p. 107-111

82. K. Hili, D. Fan, V.A. Guzenko, Y. Ekinci
Nickel electroplating for high-resolution nanostructures
Microelectronic Engineering **141** (2015) p. 122-128

83. P. Das Kanungo, P. Helfenstein, V.A. Guzenko, C. Lee, M. Paraliev, S. Tsujino
Electron beam collimation from an all-metal double-gate 40 000 nanotip array: Improved emission current and beam uniformity upon neon gas conditioning
Journal of Vacuum Science & Technology B **33** (2015) p. 03C113

84. C. Lee, P. Das Kanungo, V.A. Guzenko, P. Helfenstein, R.J.D. Miller, S. Tsujino
Field emission beam characteristics of single metal nanotip cathodes with on-chip collimation gate electrode
Journal of Vacuum Science & Technology B **33** (2015) p. 03C111

2014:

85. K. Bedner, V.A. Guzenko, A. Tarasov, M. Wipf, R.L. Stoop, S. Rigante, J. Brunner, W. Fu, C. David, M. Calame, J. Gobrecht and C. Schönenberger
Investigation of the dominant 1/f Noise Source in Silicon Nanowire Sensors
Sensors and Actuators B **191** (2014) p. 270 - 275

86. S.S. Sarkar, H.H. Solak, C. David, J.F. van der Veen
Pinhole diffraction holography for fabrication of high-resolution Fresnel Zone Plates
Optics Express **22** (2014) p. 1402-1412

87. J. Szlachetko, C.J. Milne, J. Hoszowska, J.-Cl. Dousse, W. Błachucki, J. Sà, Y. Kayser, M. Messerschmidt, R. Abela, S. Boutet, C. David, G. Williams, M. Pajek, B. Patterson, G. Smolentsev, J.A. van Bokhoven, and M. Nachtegaal
The electronic structure of matter probed with a single femtosecond hard x-ray pulse
Structural Dynamics **1** (2014) p. 021101-8

88. I. Vartiainen, R. Mokso, M. Stampanoni, and C. David
Halo suppression in full field X-ray Zernike phase contrast Microscopy
Optics Letters **39** (2014) p. 1601-1604

89. I. Mohacsi, P. Karvinen, I. Vartiainen, V.A. Guzenko, A. Somogyi, C. Kewish, P. Mercere and C. David
High efficiency X-ray nanofocusing by multilevel zone plates
Journal of Synchrotron Radiation **21** (2014) p. 497-501

90. Y. Kayser, S. Rutishauser, T. Katayama, T. Kameshima, H. Ohashi, U. Flechsig, M. Yabashi, and C. David
Wavefront metrology measurements at SACLA by means of x-ray grating interferometry
Optics Express **22** (2014) p. 9004-9015

91. I. Vartiainen, M. Warmer, D. Goeries, E. Herker, R. Reimer, C. David and A. Meents
X-ray Zernike phase contrast imaging of biological samples with tender X-rays at 50 nm resolution
Journal of Synchrotron Radiation **21** (2014) p. 1-5, doi:10.1107/S1600577514010388

92. T. Thüring, M. Abis, Z. Wang, C. David, M. Stampanoni,
X-ray phase-contrast imaging at 100 keV on a conventional source
Scientific Reports **4** (2014) p. 5198, doi:10.1038/srep05198

93. P. Karvinen, C. Borca, M. Willimann, B. Meyer, M. Birri, D. Grolimund, J. Patommel, G. Wellenreuther, G. Falkenberg, M. Guizar-Sicairos, A. Menzel and C. David
Kinoform diffractive lenses for efficient nano-focusing of hard X-rays
Optics Express **22** (2014) p. 16676-16685

94. P. Modregger, M. Kagias, S. Peter, V.A. Guzenko, C. David, and M. Stampanoni
Multiple scattering tomography
Physical Review Letters **113** (2014) p. 020801- 5

95. T. Zhou, U. Lundström, T. Thüring, S. Rutishauser, D.H. Larsson, M. Stampanoni, C. David, H.M. Hertz, and A. Burvall
Comparison of propagation- and grating-based x-ray phase-contrast imaging techniques with a liquid-metal-jet source
Proceedings of the SPIE **9033** (2014) p. 903353 doi: 10.1117/12.2043417

96. P. Modregger, S. Rutishauser, J. Meiser, C. David, and M. Stampanoni
Two-dimensional ultra-small angle X-ray scattering with grating interferometry
Applied Physics Letters **105** (2014) p. 024102-4

97. V.A. Guzenko, B. Pedrini, A. Menzel, C. David
Fabrication of nanoparticles with 3D shape control for X-ray scattering experiments
Microelectronic Engineering **121** (2014) p. 127-130

98. S. Lang, I. Zanette, M. Dominietto, M. Langer, A. Rack, G. Schulz, G. Le Duc, C. David, J. Mohr, F. Pfeiffer, B. Müller, T. Weitkamp
Comparing spatial and density resolution of grating- and propagation-based X-ray tomography of soft tissues
Journal of Applied Physics **116** (2014) p. 154903-12

99. G. Lovric, P. Oberta, I. Mohacsi, M. Stampanoni, R. Mokso,
A robust tool for photon source geometry measurements using the fractional Talbot effect
Optics Express **22** (2014) p. 2745-2760

100. G. Fülöp, S. d'Hollosy, A. Baumgartner, P. Makk, V.A. Guzenko, M.H. Madsen, J. Nygard, C. Schönenberger, S. Csonka
Local electrical tuning of the nonlocal signals in a Cooper pair splitter
Physical Review B **90** (2014) p. 235412

101. A. Mustonen, V.A. Guzenko, C. Spreu, T. Feurer, S. Tsujino
High-density metallic nano-emitter arrays and their field emission characteristics
Nanotechnology **25** (2014) p. 085203

2013:

102. S. Rutishauser, M. Bednarzik, I. Zanette, T. Weitkamp, M. Börner, J. Mohr, C. David
Fabrication of two-dimensional hard X-ray diffraction gratings
Microelectronic Engineering **101** (2013) p. 12 - 16

103. T.H. Jensen, M. Bech, T. Binderup, A. Böttiger, C. David, T. Weitkamp, I. Zanette, F. Rank, R. Feidenhans'l, A. Kjær, L. Højgaard, F. Pfeiffer
Imaging of Metastatic Lymph Nodes by X-ray Phase Contrast Tomography
PLoS ONE **8** (2013) p. e54047

104. S. Rutishauser, A. Rack, T. Weitkamp, Y. Kayser, C. David and A.T. Macrander
Heat bump on a monochromator crystal measured with X-ray grating interferometry
Journal of Synchrotron Radiation **20** (2013) p. 300 - 305

105. E. Lima, A. Diaz, M. Guizar-Sicairos, S. Gorelick, P. Pernot, T. Schleier, A. Menzel,
Cryo-scanning x-ray diffraction microscopy of frozen-hydrated yeast
Journal of Microscopy **249** (2013) p. 1-7

106. H. Wang, S. Berujon, I. Pape, S. Rutishauser, C. David, and K. Sawhney
X-ray wavefront characterization of a Fresnel zone plate using a two dimensional grating interferometer
Optics Letters **38** (2013) p. 827 - 829

107. A. Rack, T. Weitkamp, L. Assoufid, T. Rack, I. Zanette, Ch. Morawe, R. Kluender, C. David
Protocol to study wavefront preservation capabilities of reflective X-ray optics with coherent synchrotron light
Nuclear Instruments in Physics A **710** (2013) p. 101–105

108. B. Pedrini, A. Menzel, M. Guizar-Sicairos, V.A. Guzenko, S. Gorelick, C. David, B.D. Patterson, and R. Abela
Two-dimensional structure from random multi-particle X-ray scattering images using cross-correlations
Nature Communications **4** (2013) p. 1647-9

109. J. Vila-Comamala, M. Wojcik, A. Diaz, M. Guizar-Sicairos, C.M. Kewish, S. Wang and C. David
Angular spectrum simulation of X-ray focusing by Fresnel zone plates
Journal of Synchrotron Radiation **20** (2013) p. 397–404

110. T. Thüring, S. Hämmerle, S. Weiss, J. Nüesch, J. Meiser, J. Mohr, C. David, M. Stampanoni
Compact hard X-ray grating interferometry for table top phase contrast micro CT
Proceedings of the SPIE - The International Society for Optical Engineering **8668** (2013) p. 866813-1

111. T. Thüring, R. Guggenberger, H. Alkadhi, J. Hodler, M. Vich, Z. Wang, C. David, M. Stampanoni
Human hand radiography using X-ray differential phase contrast combined with dark-field imaging
Skeletal Radiology **42** (2013) p. 827-835

112. P.R. Willmott, D. Meister, S.J. Leake, M. Lange, A. Bergamaschi, M. Böge, M. Calvi, C. Cancellieri, N. Casati, A. Cervellino, Q. Chen, C. David, U. Flechsig, F. Gozzo, B. Henrich, S. Jäggi-Spielmann, B. Jakob, I. Kalichava, P. Karvinen, J. Krempasky, A. Lüdeke, R. Lüscher, S. Maag, C. Quitmann, M.L. Reinle-Schmitt, T. Schmidt, B. Schmitt, A. Streun, I. Vartiainen, M. Vitins, X. Wang and R. Wullschleger
The Materials Science beamline upgrade at the Swiss Light Source
Journal of Synchrotron Radiation **20** (2013) p. 667–682

113. T. Thüring, T. Zhou, U. Lundström, A. Burvall, S. Rutishauser, C. David, H. M. Hertz, and M. Stampanoni
X-ray grating interferometry with a liquid-jet anode source
Applied Physics Letters **103** (2013) p. 091105

114. C. Grünzweig, J. Kopecek, B. Betz, A. Kaestner, K. Jefimovs, J. Kohlbrecher, U. Gasser, O. Bunk, C. David, T. Donath, F. Pfeiffer
Quantification of the neutron dark-field imaging signal in grating interferometry
Physical Review B **88** (2013) p. 125104

115. H. Wang, S. Berujon, I. Pape, S. Rutishauser, C. David, K. Sawhney
At-wavelength metrology using the moiré fringe analysis method based on a two dimensional grating interferometer
Nuclear Instruments and Methods in Physics Research A **710** (2013) p. 78–81

116. M. Stampanoni, Z. Wang, T. Thüring, C. David, E. Rössl, U. van Stevendaal, T. Köhler, M. Trippel, G. Singer, R.A. Kubik-Huch, M.K. Hohl and N. Hauser
Toward clinical differential phase contrast mammography: preliminary evaluations and image processing schemes
Journal of Instrumentation **8** (2013) p. C05009, doi:10.1088/1748-0221/8/05/C05009

117. K. Morgan, P. Modregger, S.C. Irvine, S. Rutishauser, V.A. Guzenko, M. Stampanoni, C. David
A sensitive x-ray phase contrast technique for rapid imaging, using a single phase grid analyser
Optics Letters **38** (2013) p. 4605 – 4608

118. K. Bedner, V.A. Guzenko, A. Tarasov, M. Wipf, R.L. Stoop, D. Just, S. Rigante, O. Knopfmacher, W. Fu, R.A. Minamisawa, C. David, M. Calame, J. Gobrecht and C. Schönenberger
pH Response of Silicon Nanowire Sensors: Impact of the Nanowire Width and the Gate Oxide
Sensors and Materials **25** (2013) p. 567 - 576

119. I. Mohacsi, P. Karvinen, I. Vartiainen, A. Diaz, A. Somogyi, C.M. Kewish, P. Mercere, C. David
High efficiency X-ray nanofocusing by the blazed stacking of binary zone plates
Proceedings of the SPIE **8851** (2013) doi:10.1117/12.2022640

120. A. Meents, B. Reime, N. Stuebe, P. Fischer, M. Warmer, D. Goeries, J. Roever, J. Meyer, J. Fischer, A. Burkhardt, I. Vartiainen, P. Karvinen, C. David
Development of an in-vacuum X-ray microscope with cryogenic sample cooling for beamline P11 at PETRA III
Proceedings of the SPIE **8851** (2013) p. 88510K1-doi:10.1117/12.2022640

121. T. Zhou, U. Lundström, T. Thüring, S. Rutishauser, D.H. Larsson, H.M. Hertz, M. Stampanoni, C. David, and A. Burvall
Comparison of x-ray phase-contrast imaging methods with a liquid-metal-jet source
Optics Express **21** (2013) p. 30183 – 30195

122. V.A. Guzenko, A. Mustonen, P. Helfenstein, E.Kirk, S. Tsujino
High-density large-scale field emitter arrays for X-ray free electron laser cathodes
Microelectronic Engineering **111** (2013) p. 114 – 117

123. L. Wang, D. Fan, V.A. Guzenko, Y. Ekinci
Facile fabrication of high-resolution extreme ultraviolet interference lithography grating masks using footing strategy during electron beam writing
Journal of Vacuum Science & Technology B **31** (2013) p. 06F602

124. P. Helfenstein, V.A. Guzenko, H.W. Fink, S. Tsujino
Electron beam collimation with a 40 000 tip metallic double-gate field emitter array and in-situ control of nanotip sharpness distribution
Journal of Applied Physics **113** (2013) p. 043306

2012:

125. P. Modregger, F. Scattarella, B. R. Pinzer, C. David, and M. Stampanoni
Imaging the ultra-small angle X-ray scattering distribution with grating interferometry
Physical Review Letters **108** (2012) p. 048101 - 4

126. R.N. Wilke, M. Priebe, M. Bartels, K. Giewekemeyer, A. Diaz, P. Karvinen, T. Salditt,
Hard X-ray imaging of bacterial cells: nano-diffraction and ptychographic reconstruction
Optics Express **20** (2012) p. 19232-19254

127. A. Schubert, A. Bergamaschi, C. David, R. Dinapoli, S. Elbracht-Leong, S. Gorelick, H. Graafsma, B. Henrich, I. Johnson, M. Lohmann, A. Mozzanica, V. Radicci, R. Rassool, L. Schädler, B. Schmitt, X. Shi, and B. Sobott
Micron-resolution of a charge integrating microstrip detector with single photon sensitivity
Journal of Synchrotron Radiation **19** (2012) p. 359–365

128. S. Bérujon, H. Wang, I. Pape, K. Sawhney, S. Rutishauser, C. David
Sub-micron phase contrast imaging with a Fresnel Zone Plate and a two dimensional grating interferometer
Optics Letters **37** (2012*)* p. 1622 - 1624

129. S. Rutishauser, L. Samoylova, J. Krzywinski, O. Bunk, J. Grünert, H. Sinn, M. Cammarata, D.M. Fritz, and C. David
Exploring the wavefront of hard X-ray free-electron laser radiation
Nature Communications **3** (2012) p. 947 - 4

130. J. Vila-Comamala, Y. Pan, J.J. Lombardo, W.M. Harris, W.K.S. Chiu, C. David, Y. Wang
Zone-doubled Fresnel Zone Plates for High-Resolution Hard X-ray Full-Field Transmission Microscopy
Journal of Synchrotron Radiation **19** (2012) p. 705-709

131. J. Keckes, M. Bartosik, R. Daniel, C. Mitterer, G. Maier, W. Ecker, J. Vila-Comamala, C. David, S. Schoeder, M. Burghammer
X-ray nanodiffraction reveals strain and microstructure evolution in nanocrystalline thin films
Scripta Materialia **67** (2012) p. 748–751

132. I. Zanette, M. Bech, A. Rack, G. Le Duc, P. Tafforeau, C. David, J. Mohr, F. Pfeiffer, and T. Weitkamp
Trimodal low-dose x-ray tomography
Proceedings of the National Academy of Sciences **109** (2012) p. 10199-10204

133. G. Schulz, T. Weitkamp, I. Zanette, F. Pfeiffer, M. Müller-Gerble, C. David, and B. Müller,
Asymmetric rotational axis reconstruction of grating-based X-ray phase contrast data of the human cerebellum
Proceedings of the SPIE - The International Society for Optical Engineering **8506** (2012) p. 850604-1

134. I. Zanette, S. Rutishauser, C. David, F. Pfeiffer, J. Mohr, T. Weitkamp
Multidirectional X-ray dark-field imaging with two-dimensional gratings
AIP Conference Proceedings **1466** (2012) p. 12-17

135. C. David, S. Rutishauser, M. Sprung, I. Zanette, T. Weitkamp,
X-Ray Grating Interferometry - Applications in Metrology and Wave Front Sensing
AIP Conference Proceedings **1466** (2012) p. 23-28

136. T. Weitkamp, I. Zanette, F. Pfeiffer, C. David
Design aspects of X-ray grating interferometry
AIP Conference Proceedings **1466** (2012) p. 84-89

137. Z. Wang, T. Thüring, C. David, E. Rössl, M. Trippel, R.A. Kubik-Huche, G. Singer, M.K. Hohl, N. Hauser, M. Stampanoni, *Phase-contrast enhanced mammography: A new diagnostic tool for breast imaging*
AIP Conference Proceedings **1466** (2012) p. 103-106

138. R.A. Minamisawa, M. Süess, R. Spolenak, J. Faist, C. David, K.K. Bourdelle, J. Gobrecht, and H. Sigg,
Top-down fabricated silicon nanowires under tensile elastic strain up to 4.5%
Nature Communications **3** (2012) p. 1096

139. J. Szlachetko, M. Nachtegaal, E. de Boni, M. Willimann, O. Safonova, J. Sa, G. Smolentsev, M. Szlachetko, J.A. van Bokhoven, J.-Cl. Dousse, J. Hoszowska, Y. Kayser, P. Jagodzinski, A. Bergamaschi, B. Schmid, C. David, A. Lücke
A von Hamos x-ray spectrometer based on a segmented-type diffraction crystal for single-shot x-ray emission spectroscopy and time-resolved resonant inelastic x-ray scattering studies
Review of Scientific Instruments **83** (2012) p. 103105

140. G. Schulz, C. Waschkies, F. Pfeiffer, I. Zanette, T. Weitkamp, C. David, and B. Müller
Multimodal imaging of human cerebellum: grating-based x-ray phase tomography, magnetic resonance microscopy and histology
Scientific Reports **2** (2012) p. 824

141. P. Karvinen, S. Rutishauser, A. Mozzanica, D. Greiffenberg, P.N. Juranić, A. Menzel, A. Lutman, J. Krzywinski, D.M. Fritz, H.T. Lemke, M. Cammarata, and C. David
Single-shot analysis of hard X-ray laser radiation using a non-invasive grating spectrometer
Optics Letters **37** (2012) p. 5073 - 5075

142. A. Fölske-Schmitz, A. Peitz, V.A. Guzenko, D. Weingarth, G.G. Scherrer, A. Wokaun, R. Kötz
In situ electrochemical STM study of platinum nanodot arrays on highly oriented pyrolythic graphite prepared by electron beam lithography
Surface Science **606** (2012) p. 1922-1933

143. M. Garganourakis, V. Scagnoli, S.W. Huang, U. Staub, H. Wadati, M. Nakamura, V.A. Guzenko, M. Kawasaki, Y. Tokura
Imprinting Magnetic Information in Manganites with X Rays
Physical Review Letters **109** (2012) p. 157203

144. A. Tarasov, M. Wipf, R.L. Stoop, K. Bedner, W.Y. Fu, V.A. Guzenko, O. Knopfmacher, M. Calame, C. Schönenberger
Understanding the Electrolyte Background for Biochemical Sensing with Ion-Sensitive Field-Effect Transistors
ACS Nano **6** (2012) p. 9291-9298

145. L. Wang, B. Terhalle, V.A. Guzenko, A. Farhan, M. Hojeij, Y. Ekinci
Generation of high-resolution kagome lattice structures using extreme ultraviolet interference lithography
Applied Physics Letters **101** (2012) p. 093104

146. A. Tarasov, M. Wipf, K. Bedner, J. Kurz, W.Y. Fu, V.A. Guzenko, O. Knopfmacher, R.L. Stoop, M. Calame, C. Schönenberger
True Reference Nanosensor Realized with Silicon Nanowires
Langmuir **28** (2012) p. 9899-9905

147. L. Wang, B. Terhalle, M. Hojeij, V.A. Guzenko, Y. Ekinci
High-resolution nanopatterning by achromatic spatial frequency multiplication with electroplated grating structures
Journal of Vacuum Science & Technology B **30** (2012) p. 031603

2011:

148. J. Vila-Comamala, S. Gorelick, E. Färm, C.M. Kewish, A. Diaz, R. Barrett, V.A. Guzenko, M. Ritala, and C. David
Ultra-high resolution zone-doubled diffractive X-ray optics for the multi-keV regime
Optics Express **19** (2011) p. 175 - 184

149. M. Chabior, T. Donath, C. David, O. Bunk, M. Schuster, and F. Pfeiffer
Beam hardening effects in grating-based x-ray phase-contrast imaging
Medical Physics **38** (2011) p. 1189 - 1195

150. S.A. McDonald, F. Marone, C. Hintermüller, G. Mikuljan, C. David, M. Stampanoni
Phase Contrast X-Ray Tomographic Microscopy for Biological and Materials Science Applications.
Advanced Engineering Materials **13** (2011) p. 116 - 121

151. T. Jensen, A. Böttiger, M. Bech, I. Zanette, T. Weitkamp, S. Rutishauser, C. David, E. Reznikova, J. Mohr, L. Bager Christensen, E. Olsen, R. Feidenhans'l, F. Pfeiffer
X-ray phase-contrast tomography of porcine fat and rind
Meat Science **88** (2011) p. 379 – 383

152. B. Päivänranta, P. Sahoo, C. David, V. Auzelyte, Y. Ekinci, H.H. Solak, E.J. Tocce, C. Liu, K.O. Stuen, and P.F. Nealey
Nanofabrication of anti-reflective quartz surfaces using block copolymer structures
ACS Nano **5** (2011) p. 1860 – 1864

153. S. Rutishauser, I. Zanette, T. Donath, A. Sahlholm, J. Linnros, and C. David
Structured scintillator for hard X-ray grating interferometry
Applied Physics Letters **98** (2011) p. 171107-3

154. T. Weitkamp, I. Zanette, C. David, J. Baruchel, M. Bech, P. Bernard, H. Deyhle, T. Donath, J. Kenntner, S. Lang, J. Mohr, B. Müller, F. Pfeiffer, E. Reznikova, S. Rutishauser, G. Schulz, A. Tapfer and J.-P. Valad
Recent developments in X-ray Talbot interferometry at ESRF-ID19
Proceedings of the SPIE - The International Society for Optical Engineering **7804** (2011) p. 780406

155. J. Herzen, F. Beckmann, T. Donath, M. Ogurreck, C. David, F. Pfeiffer, J. Mohr, E. Reznikova, S. Riekehr, A. Haibel, G. Schulz, B. Müller, and A. Schreyer
X-ray grating interferometer for imaging at a second-generation synchrotron radiation source
Proceedings of the SPIE - The International Society for Optical Engineering **7804** (2011) p. 780407

156. G. Schulz, A. Morel, M.S. Imholz, H. Deyhle, T. Weitkamp, I. Zanette, F. Pfeiffer, C. David, M. Müller-Gerbl, and B. Müller
Evaluating the microstructure of human brain tissues using synchrotron radiation-based micro computed tomography
Proceedings of the SPIE - The International Society for Optical Engineering **7804** (2011) p. 78040F

157. S. Gorelick, J. Vila-Comamala, V.A. Guzenko, R. Barrett, M. Salomé and C. David
High efficiency Fresnel zone plates for hard X-rays by 100 keV e-beam lithography and electroplating
Journal of Synchrotron Radiation **18** (2011) p. 442 - 446

158. S.S. Sarkar, H.H. Solak, M. Saidani, C. David, J.F. van der Veen,
High resolution Fresnel zone plate fabrication by achromatic spatial frequency multiplication with extreme ultraviolet radiation
Optics Letters **36** (2011) p. 1860-1862

159. E. Kleymenov, J. van Bokhoven, C. David, P. Glatzel, M. Janousch, R. Alonso-Mori, M. Studer, M. Willimann, A. Bergamaschi, B. Henrich, and M. Nachtegaal
Five-element Johann-type X-ray emission spectrometer with a single-photon-counting pixel detector
Review of Scientific Instruments **82** (2011) p. 065107-7

160. M. Stampanoni, Z. Wang, T. Thüring, C. David, E. Rössl, M. Trippel, G. Singer, R.A. Kubik-Huch, M.K. Hohl, N. Hauser
The First Analysis and Clinical Evaluation of Native Breast Tissue using Differential Phase Contrast Mammography
Investigative Radiology **46** (2011) p. 801–806

161. C. David, S. Gorelick, S. Rutishauser, J. Krzywinski, J. Vila-Comamala, V.A. Guzenko, O. Bunk, E. Färm, M. Ritala, M. Cammarata, D.M. Fritz, R. Barrett, L. Samoylova, J. Grünert, and H. Sinn
Nanofocusing of hard X-ray free electron laser pulses diamond based Fresnel zone plates
Scientific Reports **1** (2011) 57

162. T. Thüring, P. Modregger, T. Grund, J. Kenntner, C. David, and M. Stampanoni
High resolution, large field of view X-ray differential phase contrast imaging on a compact setup
Applied Physics Letters **99** (2011) p. 041111

163. J. Vila-Comamala, S. Gorelick, V.A. Guzenko, and C. David
3D Nanostructuring of Hydrogen Silsesquioxane Resist by 100 keV Electron Beam Lithography
Journal of Vacuum Science and Technology B **29** (2011) p. 06F301-3

164. S. Gorelick, J. Vila-Comamala, V.A. Guzenko, C. David
High aspect ratio nanostructuring by high energy electrons and electroplating
Microelectronic Engineering **88** (2011) p. 2259 - 2262

165. B. Päivänranta, H. Merbold, R. Giannini, L. Büchi, S. Gorelick, C. David, J.F. Löffler, T. Feurer, and Y. Ekinci
High aspect ratio plasmonic nanostructures for biosensing applications
ACS Nano **5** (2011) p. 6374 - 6382

166. H. Wang, K. Sawhney, S. Berujon, E. Ziegler, S. Rutishauser, C. David
X-ray wavefront characterization with rotating shearing interferometer
Optics Express **19** (2011) p. 16550 - 16559

167. P. Modregger, B.R. Pinzer, T. Thüring, C. David, and M. Stampanoni
Sensitivity of grating interferometry
Optics Express **19** (2011) p. 18324 - 18338

168. M. Chabior, T. Donath, C. David, M. Schuster, C.G. Schroer, and F. Pfeiffer
Signal-to-noise in x-ray dark-field imaging using a grating interferometer
Journal of Applied Physics **110** (2011) p. 053105 - 8

169. T. Weitkamp, I. Zanette, G. Schulz, M. Bech, S. Rutishauser, S. Lang, T. Donath, A. Tapfer, H. Deyhle, P. Bernard, J.-P. Valade, E. Reznikova, J. Kenntner, J. Mohr, B. Müller, F. Pfeiffer, C. David, and J. Baruchel
X-ray Grating Interferometry at ESRF: Applications and Recent Technical Developments
AIP Conference Proceedings **1365** (2011) p. 28 - 31

170. S. Gorelick, J. Vila-Comamala, V.A. Guzenko, R. Barrett, M. Salomé, and C. David
High-Efficiency Gold Fresnel Zone Plates for Multi-keV X-rays
AIP Conference Proceedings **1365** (2011) p. 88 - 91

171. V.A. Guzenko, J. Romijn, J. Vila-Comamala, S. Gorelick, and C. David
Efficient E-Beam Lithography Exposure Strategies for Diffractive X-ray Optics
AIP Conference Proceedings **1365** (2011) p. 92 - 95

172. J. Vila-Comamala, S. Gorelick, E. Färm, C. M. Kewish, A. Diaz, V.A. Guzenko, R. Barrett, J. Raabe, A. Menzel, O. Bunk, M. Ritala, and C. David
Zone-Doubled Fresnel Zone Plates for Scanning Transmission X-ray Microscopy
AIP Conference Proceedings **1365** (2011) p. 192 - 195

173. M. Stampanoni, F. Marone, J. Vila-Comamala, S. Gorelick, C. David, P. Trtik, K. Jefimovs, and R. Mokso
Hard X-ray Phase-Contrast Tomographic Nanoimaging
AIP Conference Proceedings **1365** (2011) p. 239 - 242

174. I. Zanette, S. Rutishauser, C. David, and T. Weitkamp
X-*ray Interferometry with Two-Dimensional Gratings*
AIP Conference Proceedings **1365** (2011) p. 325 - 328

175. J. Vila-Comamala, A. Diaz, M. Guizar-Sicairos, A. Mantion, C. M. Kewish, A. Menzel, O. Bunk and C. David
Characterization of high-resolution diffractive x-ray optics by ptychographic coherent diffractive imaging
Optics Express **19** (2011) p. 21333 - 21344

176. J. Vila-Comamala, A. Diaz, M. Guizar-Sicairos, S. Gorelick, V.A. Guzenko, P. Karvinen, C.M. Kewish, E. Färm, M. Ritala, A. Mantion, O. Bunk, A. Menzel, C. David
Characterization of a 20-nm hard x-ray focus by ptychographic coherent diffractive imaging
Proceedings of the SPIE - The International Society for Optical Engineering **8139** (2011) p. 81390E-1

177. B. Terhalle, A. Langner, B. Päivänranta, V.A. Guzenko, C. David, and Y. Ekinci
Generation of EUV vortex beams using computer generated holograms
Optics Letters **36** (2011) p. 4143 - 4145

178. I. Zanette, T. Weitkamp, S. Lang, M. Langer, J. Mohr, C. David, J. Baruchel
Quantitative phase and absorption tomography with an X-ray grating interferometer and synchrotron radiation
Physica Status Solidi A **208** (2011) p. 2526 - 2532

179. B. Päivänranta, A. Langner, E. Kirk, C. David, Y. Ekinci
Sub-10 nm patterning using EUV interference lithography
Nanotechnology **22** (2011) p. 375302-7

180. S. Rutishauser, T. Donath, C. David, F. Pfeiffer, F. Marone, P. Modregger, and M. Stampanoni
A tilted grating interferometer for full vector field differential x-ray phase contrast tomography
Optics Express **19** (2011) p. 24890 - 24896

181. S. Rutishauser, I. Zanette, T. Weitkamp, T. Donath, and C. David
At-wavelength characterization of refractive X-ray lenses using a two-dimensional grating interferometer
Applied Physics Letters **99** (2011) p. 221104-3

182. J. Herzen, T. Donath, F. Beckmann, M. Ogurreck, C. David, F. Pfeiffer, J. Mohr, and A. Schreyer
X-ray grating interferometer for materials-science imaging at a low-coherent wiggler source
Review of Scientific Instruments **82** (2011) p. 113711 - 6

183. T. Thüring, P. Modregger, B. Pinzer, S. Rutishauser, C. David, T. Grund, J. Kenntner, M. Stampanoni
Towards X-ray differential phase contrast imaging on a compact setup
Proceedings of the SPIE - The International Society for Optical Engineering **7961** (2011) p. 79611G

184. V.A. Guzenko, J. Ziegler, A. Savouchkina, C. Padeste, C. David
Fabrication of large scale arrays of metallic nanodots by means of high resolution e-beam lithography
Microelectronic Engineering **88** (2011) 1972 - 1974

185. A. Schleunitz, V.A.Guzenko, A. Schander, M. Vogler, H. Schift
Selective profile transformation of electron-beam exposed multilevel resist structures based on a molecular weight dependent thermal reflow
Journal of Vacuum Science & Technology B **29** (2011) p. 06F302

186. D. Bleiner, F. Staub, V.A.Guzenko, Y. Ekinci, J.E. Balmer
Evaluation of lab-scale EUV microscopy using a table-top laser source
Optics Communications **284** (2011) p. 4577 – 4583

152. A. Savouchkina, A. Fölske-Schmitz, V.A.Guzenko, D. Weingarth, G.G. Scherrer, A. Wokaun, R. Kötz
In situ STM study of Pt-nanodot arrays on HOPG prepared by electron-beam lithography
Electrochemistry Communications **13** (2011)p. 484 – 487

2010:

187. K. Nygård, O. Bunk, E. Perret, C. David and J.F. van der Veen
Diffraction gratings as small-angle X-ray scattering calibration standards
Journal of Applied Crystallography **43** (2010) p. 350–351

188. S. Gorelick, J. Vila-Comamala, V. Guzenko, R. Mokso, M. Stampanoni, C. David
Direct e-beam writing of high aspect ratio nanostructures in PMMA: a tool for diffractive x-ray optics fabrication
Microelectronic Engineering **87** (2010) p. 1052–1054

189. S.S. Sarkar, H.H. Solak, J. Raabe, C. David, J.F. van der Veen
Fabrication of Fresnel zone plates with 25 nm zone width using extreme ultraviolet holography
Microelectronic Engineering **87** (2010) p. 854–858

190. A. Diaz, C. Mocuta, J. Stangl, M. Keplinger, T. Weitkamp, F. Pfeiffer, C. David, E. Ziegler, T.H. Metzger and G. Bauer
Coherence and wavefront characterization of Si-111 monochromators using double grating interferometry
Journal of Synchrotron Radiation **17** (2010) p. 299–307

191. C.M. Kewish, P. Thibault, M. Dierolf, O. Bunk, A. Menzel, J. Vila-Comamala, K. Jefimovs, F. Pfeiffer,
Ptychographic characterization of the wavefield in the focus of reflective hard X-ray optics
Ultramicroscopy **110** (2010) p. 325-329

192. M. Stampanoni, R. Mokso, F. Marone, J. Vila-Comamala, S. Gorelick, P. Trtik, K. Jefimovs, C. David
Hard X-ray 3D phase-contrast nanoimaging
Physical Review B **81** (2010) p. 140105–4

193. J. Vila-Comamala, M. Dierolf, C.M. Kewish, P. Thibault, T. Pilvi, E. Färm, V. Guzenko, S. Gorelick, A. Menzel, O. Bunk, M. Ritala, F. Pfeiffer, and C. David
High Spatial Resolution STXM at 6.2 keV Photon Energy
AIP Conference Proceedings **1221** (2010) p. 80–84

194. I. Zanette, C. David, S. Rutishauser and T. Weitkamp
2D grating simulation for X-ray phase-contrast and dark-field imaging with a Talbot interferometer
AIP Conference Proceedings **1221** (2010) p. 73–79

195. M. Stampanoni, F. Marone, P. Modregger, B. Pinzer, T. Thuering, J. Vila-Comamala, C. David, R. Mokso
Tomographic Hard X-ray Phase Contrast Micro- and Nano-imaging at TOMCAT
AIP Conference Proceedings **1266** (2010) p. 13–17

196. C. Grünzweig, C. David, O. Bunk, J. Kohlbrecher, E. Lehmann, Y.W. Lai, R. Schäfer, S. Roth, P. Lejcek, J. Kopecek, and F. Pfeiffer
Visualizing the propagation of volume magnetization in bulk ferromagnetic materials by neutron grating interferometry
Journal of Applied Physics **107** (2010) p. 09D308

197. T.H. Jensen, M. Bech, and R. Feidenhans'l, O. Bunk, T. Donath, C. David, F. Pfeiffer
Directional X-Ray Dark-Field Imaging
Physics in Medicine and Biology **55** (2010) p. 3317–3323

198. M. Bech, O. Bunk, T. Donath, R. Feidenhans'l, C. David and F. Pfeiffer
Quantitative multimodal x-ray tomography: Absorption-, phase- and darkfield-contrast
Proceedings of the SPIE - The International Society for Optical Engineering **7622** (2010) 76220N

199. A. Menzel, C.M. Kewish, P. Kraft, B. Henrich, K. Jefimovs, J. Vila-Comamala, C. David, M. Dierolf, P. Thibault, F. Pfeiffer, O. Bunk
Scanning Transmission X-Ray Microscopy with a Fast Framing Pixel Detector
Ultramicroscopy **110** (2010) p. 1143–1147

200. J. Vila-Comamala, S. Gorelick, V.A. Guzenko, C. David, E. Färm and M. Ritala
Dense High Aspect Ratio Hydrogen Silsesquioxane (HSQ) Nanostructures by 100 keV Electron Beam Lithography
Nanotechnology **21** (2010) p. 285305–6

201. S. Gorelick, V.A. Guzenko, J. Vila-Comamala and C. David
Direct e-beam writing of dense and high aspect ratio nanostructures in thick layers of PMMA for electroplating
Nanotechnology **21** (2010) p. 295303–8

202. M. Bech, O. Bunk, T. Donath, R. Feidenhans'l, C. David and F. Pfeiffer
Quantitative X-Ray Dark-Field Computed Tomography
Physics in Medicine and Biology **55** (2010) p. 5529–5539

203. K. Nygård, D.K. Satapathy, E. Perret, C. Padeste, O. Bunk, C. David, J.F. van der Veen
Surface-Specific Ordering of Reverse Micelles in Confinement
Soft Matter **6** (2010) p. 4536–4539

204. K. Nygård, S. Gorelick, J. Vila-Comamala, E. Färm, A. Bergamaschi, A. Cervellino, F. Gozzo, B.D. Patterson, M. Ritala and C. David
Beam-induced damage on diffractive hard X-ray optics
Journal of Synchrotron Radiation **7** (2011) p. 786–790

205. G. Schulz, T. Weitkamp, I. Zanette, F. Pfeiffer, F. Beckmann, C. David, S. Rutishauser, B. Müller
High-resolution tomographic imaging of a human cerebellum: Comparison of absorption and grating based phase contrast
Journal of the Royal Society Interface **7** (2010) p. 1665–1676

206. T. Donath, F. Pfeiffer, O. Bunk, C. Grünzweig, E. Hempel, S. Popescu, P. Vock, C. David
Toward Clinical X-ray Phase-Contrast CT Demonstration of Enhanced Soft-Tissue Contrast in Human Specimen
Investigative Radiology **45** (2010) p. 445 - 452

207. I. Manke, N. Kardjilov, R. Schäfer, A. Hilger, M. Strobl, M. Dawson, C. Grünzweig, G. Behr, M. Hentschel, C. David, A. Kupsch, A. Lange, J. Banhart
Three-dimensional imaging of magnetic domains
Nature Communications **1** (2010) p. 125-6

208. I. Zanette, T. Weitkamp, T. Donath, S. Rutishauser, and C. David
A two-dimensional X-ray grating interferometer
Physical Review Letters **105** (2010) p. 248102 - 4

209. T.H. Jensen, M. Bech, I. Zanette, T. Weitkamp, C. David, H. Deyhle, S. Rutishauser, E. Reznikova, J. Mohr, R. Feidenhans'l, F. Pfeiffer
Directional x-ray dark-field imaging of strongly ordered systems
Physical Review B **82** (2010) p. 214103

210. M. Stampanoni, F. Marone, P. Modregger, B. Pinzer, T. Thüring, J. Vila-Comamala, C. David, R. Mokso
Tomographic Hard X-ray Phase Contrast Micro- and Nano-imaging at TOMCAT
AIP Conference Proceedings **1266** (2010) p. 13 - 17

211. M. Bech, T.H. Jensen, O. Bunk, T. Donath, C. David, T. Weitkamp, G. Le Duc, A. Bravin, P. Cloetens and F. Pfeiffer
Advanced Contrast Modalities for X-ray Radiology: Phase-Contrast and Dark-Field Imaging using a Grating Interferometer Zeitschrift für medizinische Physik **20**, 1 (2010) p. 7 – 16

212. E.V. Skorb, D. Grützmacher, C. Dais, V.A.Guzenko, V.G. Sokolov, T.V. Gaevskaya, D.V. Sviridov
Titania-assisted electron-beam and synchrotron lithography
Nanotechnology **21** (2010)p. 315301

2009:

213. M. Bech, O. Bunk, C. David, R. Ruth, J. Rifkin, R. Loewen, R. Feidenhans'l and F. Pfeiffer
Hard X-ray Phase Contrast Imaging with Compact Synchrotron Radiation Source
Journal of Synchrotron Radiation **16** (2009) p. 1–5

214. M. Bech, T. H. Jensen, R. Feidenhans'l, O. Bunk, C. David, F. Pfeiffer
Soft-Tissue Phase-Contrast Tomography with X-Ray Tube Source
Physics in Medicine and Biology **54** (2009) p. 2747–2753

215. A. Diaz, C. Mocuta, J. Stangl, B. Mandl, C. David, J. Vila-Comamala, V. Chamard, T. H. Metzger, and G. Bauer
Coherent diffraction imaging of a single epitaxial InAs nanowire using a focused x-ray beam
Physical Review B **79** (2009) 125324–5

216. F. Pfeiffer, M. Bech, O. Bunk, T. Donath, B. Henrich, P. Kraft, and C. David
X-Ray Dark-Field and Phase-Contrast Imaging using a Grating Interferometer
Journal of Applied Physics **105** (2009) p. 102006–4

217. V. Auzelyte, C. Dais, P. Farquet, D. Grützmacher, L. Heyderman, F. Luo, S. Olliges, C. Padeste, P. Sahoo, T. Thomson, A. Turchanin, C. David, H. H. Solak
Extreme Ultraviolet Interference Lithography at the Paul Scherrer Institute
Journal of Micro- and Nanolithography **8**, (2009) p. 021204–10

218. T. Donath, F. Pfeiffer, O. Bunk, M. Bednarzik, C. Grünzweig, E. Hempel, S. Popescu, M. Hoheisel, C. David
Phase-Contrast Imaging and Tomography at 60 keV using a Conventional X-ray Tube
Review of Scientific Instruments **80** (2009) p. 053701–4

219. K. Nygård, D.K. Satapathy, J. Buitenhuis, E. Perret, O. Bunk, C. David, and J. F. van der Veen
Confinement-induced orientational alignment of quasi-2D fluids
Europhysics Letters **86** (2009) p. 66001–5

220. A. Diaz, C. Mocuta, J. Stangl, J. Vila, C. David, T.H. Metzger, G. Bauer
Spatially resolved strain within a single SiGe island investigated by x-ray scanning microdiffraction
Physica Status Solidi A **206** (2009) p. 1829-1832

221. S.A. McDonald, F. Marone, C. Hintermüller, G. Mikuljan, C. David, F. Pfeiffer, M. Stampanoni
Advanced phase-contrast imaging using a grating interferometer
Journal of Synchrotron Radiation **16** No. 4 (2009) p. 562–572

222. D. K. Satapathy, K. Nygård, O. Bunk, K. Jefimovs, E. Perret, A. Diaz, F. Pfeiffer, C. David and J.F. van der Veen
Buckling and layering transitions in confined colloids
Europhysics Letters **87** (2009) p. 34001–6

223. J. Herzen, T. Donath, F. Pfeiffer, O. Bunk, C. Padeste, F. Beckmann, A. Schreyer and C. David
Quantitative phase-contrast tomography of a liquid phantom using a conventional x-ray tube source
Optics Express **17**, No. 12 (2009) p. 10010–10018

224. J. Vila-Comamala, K. Jefimovs, T. Pilvi, J. Raabe, R.H. Fink, M. Senoner, A. Maaßdorf, M. Ritala, and C. David
Advanced Thin Film Technology for Ultrahigh Resolution X-Ray Microscopy
Ultramicroscopy **109** (2009) p. 1360–1364

225. T. Donath, M. Chabior, F. Pfeiffer, O. Bunk, E. Reznikova, J. Mohr, E. Hempel, S. Popescu, M. Hoheisel, M. Schuster, J. Baumann, and C. David
Inverse geometry for grating-based x-ray phase-contrast imaging
Journal of Applied Physics **106** (2009) p. 054703–7

226. A. Menzel, M. Dierolf, C. M. Kewish, P. Thibault, K. Jefimovs, C. David, M. Bech, T. H. Jensen, R. Feidenhans'l, A.-M. Heegaard, R. Hansen, T. Berthing, K. Martinez, J. A. Als-Nielsen, S. Kapishnikov, L. Leiserowitz, F. Pfeiffer, and O. Bunk
Advanced methods in scanning X-ray microscopy
Proceedings of the SPIE - The International Society for Optical Engineering **7378** (2009) p. 73780

227. C.N. Borca, D. Grolimund, M. Willimann, B. Meyer, K. Jefimovs, J. Vila-Comamala and C. David
The microXAS beamline at the Swiss Light Source: Towards nano-scale imaging
Journal of Physics: Conference Series **186** (2009) p. 012003

228. M. Stampanoni, F. Marone, G. Mikuljan, K. Jefimovs, P. Trtik, J. Vila-Comamala, C. David and R. Abela
Broadband X-ray full field microscopy at a superbend
Journal of Physics: Conference Series **186** (2009) p. 012018

229. F. Pfeiffer, C. David, O. Bunk, C. Poitry-Yamate, R. Grütter, B. Müller and T. Weitkamp
High-sensitivity phase-contrast tomography of rat brain in phosphate buffered saline
Journal of Physics: Conference Series **186** (2009) p. 012046

230. A. Menzel, C.M. Kewish, M. Dierolf, P. Thibault, P. Kraft, O. Bunk, K. Jefimovs, C. David and F. Pfeiffer
Hard X-ray scanning transmission microscopy with a 2D pixel array detector
Journal of Physics: Conference Series **186** (2009) p. 012054

231. S.S. Sarkar, P.K. Sahoo, H.H. Solak, C. David and J.F. van der Veen
Fresnel zone plates made by holography in the extreme ultraviolet region
Journal of Physics: Conference Series **186** (2009) p. 012071

232. J. Vila-Comamala, K. Jefimovs, T. Pilvi, M. Ritala, S.S. Sarkar, H.H. Solak, V.A. Guzenko, M. Stampanoni, F. Marone, J. Raabe, G. Tzvetkov, R.H. Fink, D. Grolimund, C.N. Borca, B. Kaulich and C. David
Advanced X-ray diffractive optics
Journal of Physics: Conference Series **186** (2009) p. 012078

233. K. Nygård, D.K. Satapathy, O. Bunk, E. Perret, J. Buitenhuis, C. David, and J.F. van der Veen
Grating-based holographic X-ray diffraction: theory and application to confined fluids
Journal of Applied Crystallography **42** (2009) p. 1129–1138

234. C.-P. Richter, S. Shintani-Smith, A. Fishman, C. David, I. Robinson, C. Rau
Imaging of cochlear tissue with a grating interferometer and hard X-rays
Microscopy Research and Technique **72** (2009) p. 902–907