

# Scientific Publications X-Ray Optics Group past 10 years

Last updated: June 2016

## 2016:

1. 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
2. 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
3. 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
4. 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 SACLA by means of X-ray grating interferometry,*  
Optics Letters **41** (2016) p. 733-736
5. 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
6. 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
7. 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

## 2015:

8. S.V. Roth, R. Döhrmann, R. Gehrke, R. Röhlberger, 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
9. 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
10. 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
11. 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
12. I. Mohacsi, I. Vartiainen, M. Guizar-Sicairos, P. Karvinen, C. Kewish, A. Somogyi, V.A. Guzenko, E. Müller, E. Färm, M. Ritala, and C. David  
*Double-sided diffractive X-ray optics for hard X-ray microscopy*  
Optics Express **23** (2015) p. 776-786
13. 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

14. 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
  15. 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** (2014) p. 7644
  16. 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
  17. 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
  18. R. Kirchner, V.A. Guzenko, M. Rohn, E. Sonntag, M. Mühlberger, I. Bergmair, H. Schiff  
*Bio-inspired 3D funnel structures made by grayscale electron-beam patterning and selective topography equilibration*  
Microelectronic Engineering **141** (2015) p. 107-111
  19. K. Hili, D. Fan, V.A. Guzenko, Y. Ekinici  
*Nickel electroplating for high-resolution nanostructures*  
Microelectronic Engineering **141** (2015) p. 122-128
  20. K. Hili, D. Fan, V.A. Guzenko, Y. Ekinici  
*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
  21. 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
  22. 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:**
23. 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
  24. 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
  25. J. Szlachetko, C.J. Milne, J. Hozzowska, J.-Cl. Dousse, W. Blachucki, 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. Nachttegaal  
*The electronic structure of matter probed with a single femtosecond hard x-ray pulse*  
Structural Dynamics **1** (2014) p. 021101-8
  26. 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
  27. 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

28. 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
29. 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
30. 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
31. 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
32. 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
33. 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
34. 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
35. M. Guizar-Sicairos, I. Johnson, A. Diaz, M. Holler, P. Karvinen, H.C. Stadler, R. Dinapoli, O. Bunk, A. Menzel,  
*High-throughput ptychography using Eiger: scanning X-ray nano-imaging of extended regions*  
Optics Express **22** (2014) p. 14859-14870
36. M. Holler, A. Diaz, M. Guizar-Sicairos, P. Karvinen, E. Färm, E. Harkonen, M. Ritala, A. Menzel, J. Raabe, O. Bunk,  
*X-ray ptychographic computed tomography at 16 nm isotropic 3D resolution*  
Scientific Reports **4** (2014) p. 3857
37. 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
38. 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
39. 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
40. 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
41. 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:

42. 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

43. 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
44. 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
45. 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. 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
52. 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
53. 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
54. 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
55. 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
56. 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
57. 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
58. 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

59. 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
60. 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
61. 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
62. 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
63. 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
64. 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:

65. 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
66. R.N. Wilke, M. Priebe, M. Bartels, K. Giewekemeyer, A. Diaz, P. Karvinen, T. Salditt,  
*Hard X-ray imaging of bacterial cells: nano-diffraction andptychographic reconstruction*  
Optics Express **20** (2012) p. 19232-19254
67. 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
68. 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
69. 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
70. 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
71. 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
72. 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

73. 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
74. 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
75. 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
76. T. Weitkamp, I. Zanette, F. Pfeiffer, C. David  
*Design aspects of X-ray grating interferometry*  
AIP Conference Proceedings **1466** (2012) p. 84-89
77. 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
78. 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
79. J. Szlachetko, M. Nachttegaal, 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
80. G. Schulz, C. Waschgies, 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
81. 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  
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Optics Letters **37** (2012) p. 5073 - 5075
82. 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
83. M. Garganourakis, V. Scagnoli, S.W. Huang, U. Staub, H. Wadati, M. Nakamura, V.A. Guzenko, M. Kawasaki, Y. Tokura  
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