David L. Windt
Publications

Peer-Reviewed Journals

1. D. L. Windt, R. P. Conley, E. M. Gullikson, C. Gollwitzer, M. Krumrey, and C. Laubis, 'Bilayer and trilayer X-ray mirror coatings containing W, Pt, or Ir in combination with C, C/Co, B_4C, or B_4C/Ni: X-ray Reflectance, Film Stress, and Temporal Stability', Appl. Opt. 62(36), 9568-9576 (2023) doi: 10.1364/AO.496511
2. J. P. Mason, P. C. Chamberlin, D. Seaton, J. Burkepile, R. Colaninno, K. Dissauer, F. G. Eparvier, Y. Fan, S. Gibson, A. R. Jones, C. Kay, M. Kirk, R. Kohnert, W. D. Pesnell, B. J. Thompson, A. M. Veronig, M. J. West, D. Windt, T. N. Woods, 'SunCET: The Sun Coronal Ejection Tracker Concept', J. Space Weather and Space Climate, 11, 20, (2021) doi: 10.1051/swsc/2021004
3. L. A. Rachmeler, A. R. Winebarger, S. L. Savage, L. Golub, K. Kobayashi, G. D. Vigil, D. H. Brooks, J. W. Cirtain, B. De Pontieu, D. E. McKenzie, R. J. Morton, H. Peter, P. Testa, S. K. Tiwari, R. W. Walsh, H. P. Warren, C. Alexander, D. Ansell, B. L. Beabout, D. L. Beabout, C. W. Bethge, P. R. Champey, P. N. Cheimets, M. A. Cooper, H. K. Creel, R. Gates, C. Gomez, A. Guillory, H. Haight, W. D. Hogue, T. Holloway, D. W. Hyde, R. Kenyon, J. N. Marshall, J. E. McCracken, K. McCracken, K. O. Mitchell, M. Ordway, T. Owen, J. Ranganathan, B. A. Robertson, M. J. Payne, W. Podgorski, J. Pryor, J. Samra, M. D. Sloan, H. A. Soohoo, D. B. Steele, F. V. Thompson, G. S. Thornton, B. Watkinson & D. Windt, 'The High-Resolution Coronal Imager, Flight 2.1', Solar Physics, 294, 174 (2019) doi: 10.1007/s11207-019-1551-2
4. D. L. Windt, 'Monochromatic mammography using scanning X-ray mirrors', Rev. Sci. Instrum., 89, 083702 (2018) doi:10.1063/1.5041799
5. H. L. Marshall, H. Moritz Günther, R. K. Heilmann, N. S. Schulz, M. Egan, T. Hellickson, D. L. Windt, E. M. Gullikson, B. Ramsey, G. Tagliaferri, and G. Pareschi, 'Design of a broad-band soft X-ray polarimeter', J. Astron. Telesc. Instrum. Syst., 4, 011005-1 – 011005-12 (2018), doi: 10.1117/1.JATIS.4.1.011005
6. J. Goldstein, C. R. Chappell, M.W. Davis, M. H. Denton, R. E. Denton, D. L. Gallagher, G. R.Gladstone, M. B. Lecocke, B. R. Sandel, and D. L. Windt, 'Imaging the global distribution of plasmaspheric oxygen', J. Geo. Res. – Space Physics, , 123, 2078 – 2103 (2018), doi: 10.1002/2017JA024531
7. D. L. Windt and E. M. Gullikson, '$Pd/B_4C/Y$ multilayer coatings for extreme ultraviolet applications near 10 nm wavelength', App. Op., 54, 5850 – 5860 (2015); doi: 10.1364/AO.54.005850
8. D. L. Windt, 'Laboratory-based X-ray reflectometer for multilayer characterization in the 15-150 keV energy band', Rev. Sci. Instrum., 86, 043107 (2015); doi: 10.1063/1.4916737
9. K. Kobayashi, J. Cirtain, A. R. Winebarger, K. Korreck, L. Golub, R. W. Walsh, B. De Pontieu, C. DeForest, A. Title, S. Kuzin, S. Savage, D. Beabout, B. Beabout, W. Podgorski, D. Caldwell, K. McCracken, M. Ordway, H. Begner, R. Gates, S. McKillop, P. Cheimets, S. Platt, N. Mitchell, D. Windt, 'Hi-C: The High Resolution Coronal Imager', Solar Physics (2014) doi: 10.1007/s11207-014-0544-4
10. D. Martínez-Galarce, R. Soufli, D. L. Windt, M. Bruner, E. Gullikson, S. Khatri, E. Spiller, J. C. Robinson, S. Baker, E. Prast, 'Multisegmented, multilayer-coated mirrors for the Solar Ultraviolet Imager', Opt. Eng. 52, 095102 (2013)
11. J. R. Lemen, A. M. Title, D. J. Akin, P. F. Boerner, C. Chou, J. F. Drake, D. W. Duncan, C. G. Edwards, F. M. Friedlaender, G. F. Heyman, N. E. Hurlburt, N. L. Katz, G. D. Kushner, M. Levay, R. W. Lindgren, D. P. Mathur, E. L. McFeaters, S. Mitchell, R. A. Rehse, C. J. Schrijver, L. A. Springer, R. A. Stern, T. D. Tarbell, J.-P. Wuelser, C. J. Wolfson, C. Yanari, J. A. Bookbinder, P. M. Cheimets, D. Caldwell, E. E. Deluca, R. Gates, L. Golub, S. Park, W. A. Podgorski, R. I. Bush, P. H. Scherrer, M. A. Gummin, P. Smith, G. Auker, P. Jerram, P. Pool, R. Soufli, D. L. Windt, S. Beardsley, M. Clapp, J. Lang, N. Waltham, 'The Atmospheric Imaging Assembly (AIA) on the Solar Dynamics Observatory (SDO)', Solar Phys., 275, 17 – 40 (2012)

12. P. Boerner, C. Edwards, J. Lemen, A. Rausch, C. Schrijver, R. Shine, L. Shing, R. Stern, T. Tarbell, A. Title, C. J. Wolfson, R. Soufli, E. Spiller, E. Gullikson, D. McKenzie, D. Windt, L. Golub, W. Podgorski, P. Testa, M. Weber, 'Initial Calibration of the Atmospheric Imaging Assembly (AIA) on the Solar Dynamics Observatory (SDO)', Solar Phys., 275, 41 – 66 (2012)
13. A. J. Corso, P. Zuppella, D. L. Windt, M. Zangrando, M. G. Pelizzo, 'Extreme ultraviolet multilayer for the FERMI@Elettra free electron laser beam transport system', Opt. Ex., 20, 8006 – 8014 (2012)
14. M. G. Pelizzo, A. J. Corso, P. Zuppella, P. Nicolosi, S. Fineschi, J. Seely, B. Kjornrattanawanich, D. L. Windt, 'Long-term stability of Mg/SiC multilayers', Opt. Eng. 51, 023801 (2012)
15. M. G. Pelizzo, A. J. Corso, P. Zuppella, D. L. Windt, G. Mattei and P. Nicolosi, 'Stability of EUV multilayer coatings to low energy proton bombardment', Opt. Ex. 19, 14838 – 14844 (2011)
16. A. J. Corso, P. Zuppella, P. Nicolosi, D. L. Windt, E. Gullikson, and M. G. Pelizzo, 'Capped Mo/Si multilayers with improved performance at 30.4 nm for future solar missions', Opt. Ex,, 19, 13963 – 13973 (2011)
17. P. Zuppella, G. Monaco, A. J. Corso, P. Nicolosi, D. L. Windt, V. Bello, G. Mattei, M. G. Pelizzo, 'Iridium/silicon multilayers for EUV applications in the 20-35 nm wavelength range', Opt. Lett., 36, 1203 – 1205 (2011)
18. B. Kjornrattanawanich, D. L. Windt, and J. F. Seely, 'Optical constants determination of samarium, holmium and erbium in the 1.5-850 eV spectral range using a transmittance method', App. Opt., 49, 6006 – 6013 (2010)
19. M. G. Pelizzo, M. Suman, D. L. Windt, P. Zuppella and P. Nicolosi, 'EUV multilayer coated mirrors for atto-physics, photolithography and space experiments: Software design procedure', Nucl. Inst. & Meth. A, 623, 782 – 785 (2010)
20. D. L. Windt and J. A. Bellotti, 'Performance, structure and stability of SiC/Al multilayer films for extreme ultraviolet applications', App. Op., 48, 4932 – 4941 (2009)
21. D. L. Windt, J. A. Bellotti, B. Kjornrattanawanich, and J. F. Seely, 'Performance optimization of Si/Gd extreme ultraviolet multilayers', App. Op., 48, 5502 – 5508 (2009)
22. M. Suman, M. G. Pelizzo, D. L. Windt and P. Nicolosi, 'Extreme-ultraviolet multilayer coatings with high spectral purity for solar imaging', App. Op., 48, 5432 – 5437 (2009)
23. B. Kjornrattanawanich, D. L. Windt, J. A. Bellotti and J. F. Seely, 'Measurement of dysprosium optical constants in the 2-830 eV spectral range using a transmittance method, and compilation of the revised optical constants of lanthanum, terbium, neodymium, and gadolinium', App. Opt., 48, 3084 – 3093 (2009)
24. M. G. Pelizzo, M., G. Monaco, P. Nicolosi, David L. Windt, 'High performance EUV multilayer structures insensitive to capping layer optical parameters', Opt. Exp., 165, 15228-15237 (2008)
25. M. Suman, M.-G. Pelizzo, P. Nicolosi, D. L. Windt, 'Aperiodic multilayers with enhanced reflectivity for extreme ultraviolet lithography', App. Op., 47, 2906-2914 (2008)
26. B. Kjornrattanawanich, D. L. Windt and J. F. Seely, 'Normal-incidence silicon–gadolinium multilayers for imaging at 63 nm wavelength', Opt. Lett., 33, 465 (2008)
27. J. L. Culhane, L. K. Harra, A. M. James, J. Al-Janabi, L. J. Bradley, R. A. Chaudry, K. Rees, J. A. Tandy, P. Thomas, M. C. R. Whillock, B. Winter, G. Doschek, C. M. Korendyke, C. M., Brown, S. Myers, J. Mariska, J. Seely, J. Lang, B. J. Kent, B. M., Shaughnessy, P. R. Young, G. M. Simnett, C. M., Castelli, S. Mahmoud, H. Mapson-Menard, B. J. Probyn, R. J. Thomas, J. Davila, K. Dere, D. Windt, J. Shea, R. Hagood, R. Moye, H. Hara, T. Watanabe, K. Matsuzaki, T. Kosugi, V. Hansteen, Ø. Wikstol, 'The EUV Imaging Spectrometer for Hinode', Solar Physics, 243, 19 – 61 (2007)
28. R. Soufli, S. L. Baker, D. L. Windt, E. M. Gullikson, J. C. Robinson, W. A. Podgorski, and L. Golub, 'Atomic force microscopy characterization of Zerodur mirror substrates for the extreme ultraviolet telescopes aboard NASA's Solar Dynamics Observatory, App. Opt., 46, 3156 – 3163 (2007)

29. B. Kjornrattanawanich, D. L. Windt, J. F. Seely and Yu. A. Uspenskii, 'SiC/Tb and Si/Tb multilayer coatings for EUV solar imaging', App. Opt., 45, 1765 – 1772 (2006)
30. D. L. Windt, J. F. Seely, B. Kjornrattanawanich, and Yu. A. Uspenskii, 'Tb-based EUV multilayers', Opt. Lett., 30, 3186 – 3188 (2005)
31. D. L. Windt, S. Donguy, J. F. Seely, B. Kjornrattanawanich, 'Experimental comparison of extreme-ultraviolet multilayers for solar physics', App. Opt., 43, 1835 – 1848 (2004)
32. J. F. Seely, C. M. Brown, D. L. Windt, S. Donguy, B. Kjornrattanawanich, 'Normal-Incidence Efficiencies of Multilayer-Coated Laminar Gratings for the Extreme-Ultraviolet Imaging Spectrometer on the Solar-B Mission', App. Op., 43, 1463 – 1471 (2004)
33. J. Dalla Torre, G. H. Gilmer, D. L. Windt, R. Kalyanaraman, F. H. Bauman, P. L. O'Sullivan, J. Sapjeta, T. Diaz de la Rubia, and M. Djafari Rouhani, 'Microstructure of thin tantalum films sputtered onto inclined substrates: experiments and atomistic simulations', J. App. Phys., 94, 263 – 271 (2003)
34. D. L. Windt, S. Donguy, C. J. Hailey, J. Koglin, V. Honkimaki, E. Ziegler, F. E. Christensen, C. M. H. Chen, F. A. Harrison, W. W. Craig, 'W/SiC X-ray multilayers optimized for use above 100 keV', App. Opt., 42, 2415 – 2421 (2003)
35. D. L. Windt, E. M. Gullikson, C. C. Walton, 'Normal-incidence reflectance of optimized W/B_4C multilayers in the range 1.4 nm < λ < 2.4 nm', Opt. Lett., 27, 2212-2214 (2002)
36. D. L. Windt, "The feasibility of detecting X-ray halos due to intergalactic 'cosmological' gray dust", Ap. JL, 564, L61-64 (2002)
37. L. Golub, E. Deluca, P. Hamilton, G. Nystrom, D. L. Windt, W. K. H. Schmidt and A. Dannenberg, 'A photometric imaging solar telescope, tunable in the extreme ultraviolet, utilizing multilayer X-ray optics', Rev. Sci. Instrum., 73, 1908 – 1913 (2001)
38. D. L. Windt, F. E. Christensen, W. W. Craig, C. Hailey, F. A. Harrison, M. Jimenez-Garate, R. Kalyanaraman, and P. H. Mao, 'Growth, structure and performance of depth-graded W/Si multilayers for hard X-ray optics', J. Appl. Phys., 88, 460 – 470 (2000)
39. F. E. Christensen, W. W. Craig, M. Jimenz-Garate, C. J. Hailey, F. A. Harrison, P. H. Mao, D. L. Windt, E. Ziegler, V. Honkimaki, M. S. Del Rio, A. Souvorov, and A. Freund, 'Measured reflectance of graded multilayer mirrors designed for astronomical hard X-ray telescopes', Nucl. Instr. Meth. A, 451, 572-581 (2000)
40. W. W. Craig, C. J. Hailey, M. Jimenez-Garate, D. L. Windt, F. A. Harrison, P. H. Mao, F. E. Christensen, and A. M. Hussein, 'Development of thermally formed glass optics for astronomical hard X-ray telescopes', Opt. Ex., 7, 4, 178-185 (2000)
41. D. L. Windt, 'Stress, microstructure and stability of Mo/Si, W/Si, and Mo/C multilayer films', J. Vac. Sci. Tech., A., 18, 980 – 991 (2000)
42. D. L. Windt, S. M. Kahn, and W. C. Cash, 'The scattering of X-rays by interstellar dust on the micro-arcsecond scale', Ap. J, 528, 306 – 309 (2000)
43. D. L. Windt, 'Periodic and depth-graded Cu/Si multilayers for hard X-ray optics', Appl. Phys. Let., 74, 2890 – 2892 (1999)
44. P. H. Mao, F. A. Harrison, D. L. Windt, and F. E. Christensen, 'Optimization of graded multilayer designs for astronomical X-ray telescopes', Appl. Op., 38, 4766 – 4775 (1999)
45. D. L. Windt, 'Low-stress W/Cr bilayer films for use as SCALPEL® mask scattering layers', J. Vac. Sci. Tech., B, 17, 1385 – 1389 (1999)
46. D. L. Windt and R. A. Cirelli, 'Amorphous carbon films for use in both variable transmission apertures and attenuated phase-shift masks for DUV lithography', J. Vac. Sci., Tech., B, 17, 930-932 (1999)
47. D. L. Windt, 'IMD - Software for modeling the optical properties of multilayer films', Computers in Physics, 12, 360-370 (1998)
48. J. A. Liddle, M. I. Blakey, T. Saunders, R. C. Farrow, L. A. Fetter, C. S. Knurek, R. Kasica, A. E. Novembre, M. L. Peabody, D. M. Tennant, D. L. Windt, M. Postek, 'Metrology of scattering with angular limitation projection electron lithography masks', J. Vac. Sci. Technol. B, 15, 2197 – 2203 (1997)
49. L. R. Harriott, S. D. Berger, C. Biddick, M. Blakey, S. Bowler, K. Brady, R. Camarda, W. Connelly, A. Crorken, J. Custy, R. DeMarco, R. Farrow, J. Felker, L. Hopkins, H. Huggins, C. Knurek, J. Kraus, R. Freeman,

J. Liddle, M. Mkrtchyan, A. Novembre, M. Peabody, R. Tarascon, H. Wade, W. Waskiewicz, G. Watson, K. Werder, D. L. Windt, 'The SCALPEL proof of concept system', J. Vac. Sci. Tech. B, Dec (1996)

50. J. A. Liddle et al., 'The Scattering with Angular Limitation in Projection Electron-Beam Lithography (SCALPEL) system', Jpn. J. Appl. Phys., 34, 6663 (1995)
51. D. L. Windt, W. L. Brown, C. A. Volkert, and W. K. Waskiewicz, 'Variation in stress with background pressure in sputtered Mo/Si multilayer films', J. Appl. Phys. , 78, 2423-2430 (1995)
52. K. B. Nguyen, A. K. Ray-Chaudhuri, R. H. Stulen, K. Krenz, L. A. Fetter, D. M. Tennant, and D. L. Windt, 'Printability of substrate and absorber defects on extreme ultraviolet lithographic masks', J. Vac. Sci. Technol. B, 13, 3082 (1995)
53. Z. Tan, A. A. MacDowell, B. La Fontaine, J. E. Bjorkholm, D. Tennant, D. Taylor, M. Himel, R. R. Freeman, W. K. Waskiewicz, D. L. Windt, S. Spector, A. K. Ray-Chaudhuri, R. H. Stulen, W. Ng, and F. Cerrina, 'At-wavelength metrology of 13 nm lithography imaging optics', Rev. Sci. Instrum. 66, 2241-2243 (1995)
54. D. L. Windt and W. K. Waskiewicz, 'Multilayer facilities for EUV lithography', J. Vac. Sci. Technol. B, 12, 3826-3832 (1994)
55. G. Kubiak, D. Tichenor, M. Malinowski, R. Stulen, S. Haney, K. Berger, R. Nissen, G. Wilkerson, P. Paul, S. Birtola, P. Jin, W. Sweatt, W. Chow, J. Bjorkholm, R. Freeman, M. Himel, A. MacDowell, D. Tennant, O. Wood, W. Waskiewicz, D. White, D. L. Windt, and T. Jewell, 'Characterization of an expanded-field Schwarzschild objective for extreme ultraviolet lithography', J. Vac. Sci. Technol. B, 12, 3820-3825 (1994)
56. O. R. Wood, J. E. Bjorkholm, L. Fetter, M. D. Himel, D. M. Tennant, A. A. MacDowell, B. LaFontaine, J. E. Griffith, G. Taylor, W. K. Waskiewicz, D. L. Windt, J. B. Kortright, E. Gullikson, and K. Nguyen, 'Wavelength dependence of resist sidewall angle in EUV lithography', J. Vac. Sci. Technol. B, 12, 3841-3845 (1994)
57. D. L. Windt, W. K. Waskiewicz and J. E. Griffith, 'Surface finish requirements for soft X-ray mirrors', App. Opt., 33, 2025-2031 (1994)
58. K. Early, D. L. Windt, W. K. Waskiewicz, O. R. Wood, II, and D. M. Tennant, 'Repair of soft X-ray optical elements by stripping and redeposition of Mo/Si reflective coatings', J. Vac. Sci. Tech. B, 11, 2926-2930 (1993)
59. D. M. Tennant, L. A. Fetter, L. R. Harriott, A. A. MacDowell, P. P. Mulgrew, J. Z. Pastalan, W. K. Waskiewicz, D. L. Windt, and O. R. Wood II, 'Mask technologies for soft X-ray projection lithography at 13 nm', App. Op., 32, 7007-7011 (1993)
60. D. A. Tichenor, G. D. Kubiak, M. E. Malinowski, R. H. Stulen, S. J. Haney, K. W. Berger, L. A. Brown, W. C. Sweatt, J. E. Bjorkholm, R. R. Freeman, M. D. Himel, A. A. MacDowell, D. M. Tennant, O. R. Wood II, J. Bokor, T. E. Jewell, W. M. Mansfield, W. K. Waskiewicz, D. L. White, and D. L. Windt, 'Soft X-ray projection lithography experiments using Schwarzschild imaging optics', Appl. Op., 32, 7068-7071 (1993)
61. A. A. MacDowell, J. E. Bjorkholm, K. Early, R. R. Freeman, M. Himel, P. P. Mulgrew, L. H. Szeto, D. W. Taylor, D. M. Tennant, 0. R. Wood, II, J. Bokor, L. Eichner, T. E. Jewell, W. K. Waskiewicz, D. L. White, D. L. Windt, and F. Zernike, 'Soft X-ray projection imaging using a 1:1 ring-field optic', Appl. Op., 32, 7072-7078 (1993)
62. J. C. Bean, L. J. Peticolas, R. Hull, D. L. Windt, R. Kuchibhotia, and J. C. Campbell, 'Design and fabrication of asymmetric strained layer mirrors for optoelectronic applications', Appl. Phys. Lett., 63, 444-446 (1993)
63. D. L. Windt, R. Hull, and W. K. Waskiewicz, 'Interface imperfections in metal/Si multilayers', J. Appl. Phys., 71, 2675-2678 (1992)
64. R. R. Kola, D. L. Windt, W. K. Waskiewicz, B. E. Weir, R. Hull, G. K. Celler and C. A. Volkert, 'Stress relaxation in Mo/Si X-ray multilayer structures' Appl. Phys. Letters, 60, 3120-3122 (1992)
65. D. M. Tennant, L. A. Fetter, L. R. Harriott, A. A. MacDowell, P. P. Mulgrew, W. K. Waskiewicz, D. L. Windt, and 0. R. Wood, II, 'Defect repair for soft X-ray projection lithography masks', J. Vac. Sci. Tech. B, 10, 3134-3140 (1992).
66. D. L. Windt, 'XUV Optical Constants of Single-Crystal GaAs and Sputtered C, Si, Cr_3C_2, Mo and W', Appl. Optics, 30, 15-25 (1991)
67. D. M. Tennant, J. E. Bjorkholm, R. D'Souza, L. Eichner, R. R. Freeman, T. E. Jewell, A. A. MacDowell, W. M. Mansfield, J. Pastalan, L. H. Szeto, W. K. Waskiewicz, D. L. White, D. L. Windt, O. R. Wood, II, 'Reflective mask technologies and imaging results in soft X-ray projection lithography', J. Vac. Sci. Tech. B, 9, 3176-3183 (1991)
68. G. D. Kubiak, D. A. Tichenor, M. E. Malinowski, R. H. Stulen, S. J. Haney, K. W. Berger, L. A. Brown, J. E. Bjorkholm, R. R. Freeman, W. M. Mansfield, D. M. Tennant, O. R. Wood, II, J. Bokor, T. E. Jewell, D. L.

White, D. L. Windt, and W. K. Waskiewicz, 'Diffraction-limited soft X-ray projection lithography with a laser-plasma source', J. Vac. Sci. Tech. B., 9, 3184-3188 (1991)

69. A. A. MacDowell, J. E. Bjorkholm, J. Bokor, L. Eichner, R. R. Freeman, W. M. Mansfield, J. Pastalan, L. H. Szeto, D. M. Tennant, O. R. Wood II, T. E. Jewell, W. K. Waskiewicz, D. L. White, D. L. Windt, W. T. Silfvast, and F. Zernike, 'Soft X-ray projection lithography using a 1:1 ring field optical system', J. Vac. Sci.Tech. B, 9, 3193-3197 (1991)
70. D. A. Tichenor, G. D. Kubiak, M. E. Malinowski, R. H. Stulen, S. J. Haney, K. W. Berger, L. A. Brown, R. R. Freeman, W. M. Mansfield, D. M. Tennant, O. R. Wood, II, A. A. MacDowell, J. Bokor, T. E. Jewell, D. L. White, D. L. Windt, and W. K. Waskiewicz, 'Diffraction-limited soft X-ray projection imaging using a laser-plasma source', Optics Lett., 16, 1557-1559 (1991)
71. J. E. Bjorkholm, J. Bokor, L. Eichner, R. R. Freeman, J. Gregus, T. E. Jewell, W. M. Mansfield, A. A. MacDowell, E. L. Raab, W. T. Silfvast, L. H. Szeto, D. M. Tennant, W. K. Waskiewicz, D. L. White, D. L. Windt, and O. R. Wood, II, 'Reduction imaging at 14nm using multilayer-coated optics: printing features smaller than 0.1 μm.', J. Vac. Sci. Tech. B., 8, 1509-1513 (1990)
72. D. W. Berreman, J. E. Bjorkholm, M. Becker, L. Eichner, R. R. Freeman, T. E. Jewell, W. M. Mansfield, A. A. MacDowell, M. L. O'Malley, E. L. Raab, W. T. Silfvast, L. H. Szeto, D. M. Tennant, W. K. Waskiewicz, D. L. White, D. L. Windt, and O. R. Wood, II, 'The use of tri-level resists for high-resolution soft x-ray projection lithography', Appl. Phy. Let., 56, 2180-2182 (1990)
73. D. W. Berreman, J. E. Bjorkholm, M. Becker, L. Eichner, R. R. Freeman, T. E. Jewell, W. M. Mansfield, A. A. MacDowell, M. L. O'Malley, E. L. Raab, W. T. Silfvast, L. H. Szeto, D. M. Tennant, W. K. Waskiewicz, D. L. White, D. L. Windt, and O. R. Wood, II, 'Soft x-ray projection lithography: printing of 0.2 μm features using 20:1 reduction', Optics Let., 15, 529-531 (1990)
74. W. Cash, T. Cook, C. Chambellan, D. Heyse, D. Hofmockel, T. P. Snow, D. Windt, and C. Zaidins, 'A far ultraviolet rocket-borne spectrograph', Experimental Astronomy, 1, 123-143 (1989)
75. J. B. Kortright and D. L. Windt, `Amorphous silicon carbide coatings for extreme ultraviolet optics', Appl. Op., 27, 2841-2846 (1988)
76. D. L. Windt, W. Cash, M. Scott, P. Arendt, B. Newnam, R. F. Fisher, A. B. Swartzlander, M. Pinneo, and P. Z. Takacs, 'Optical constants for thin films of C, diamond, Al, Si, and CVD-SiC from 24 Å to 1216 Å', Appl. Op., 27, 279-295 (1988)
77. D. L. Windt, W. Cash, M. Scott, P. Arendt, B. Newnam, R. F. Fisher, and A. B. Swartzlander, 'Optical constants for thin films of Ti, Zr, Nb, Mo, Ru, Rh, Pd, Ag, Hf, Ta, W, Re, Os, Ir, Pt, and Au from 24 Å to 1216 Å', Appl. Op., 27, 246-278 (1988)
78. M. Scott, P. Arendt, B. Springer, R. Cordi, B. Cameron, D. L. Windt, and W. Cash, `Multilayer reflectors for the extreme ultraviolet', J. Opt. Soc. Amer. A, 2, P42 (1985)
79. D. L. Windt and B. Bach, `Ion beam deposited silicon carbide on glass optics and replica gratings', Appl. Op., 23, 3047 (1984)

Book Chapters

1. D. L. Windt (2021), 'X-ray Multilayer Coatings', In 'The WSPC Handbook of Astronomical Instrumentation', Vol. 4, pp. 135 – 146, 'X-ray Astronomical Instrumentation', Ed. David N. Burrows, World Scientific Publishing, ISBN: 978-981-4644-31-0, doi: 10.1142/9789811203800_0007

Other Publications

1. P. M. Solly, W. W. Zhang, D. Windt, Y. Yao, 'Coating of Thin, Lightweight X-ray Mirrors Without Distortion', Proc. SPIE, 12181 121814P-1 (2022), https://doi.org/10.1117/12.2629540
2. J. J. Drake, P. Cheimets, C. Garraffo, B. Wargelin, A. Youngblood, V. L. Kashyap, P. Testa, D. Caldwell, J. Mason, B. Fleming, K. France, S. Wolk, O. Siegmund, T. Koskinen, J. Alvarado-Gomez, M. Mercedes Lopez-Morales, G. Gronoff, J. Bookbinder, M. Barstow, D. Windt, R. Gladstone, C. Loghry, R. Yarbrough, 'NExtUP: the Normal-incidence Extreme Ultraviolet Photometer', Proc. SPIE, 1182108 (2021) https://doi.org/10.1117/12.2594408
3. M. Suman, M. G. Pelizzo, D. L. Windt, G. Monaco, S. Zuccon, and P. Nicolosi, "Innovative design of EUV multilayer reflective coating for improved spectral filtering in solar imaging", Proc. SPIE, 1056667 (2020)
4. H. L. Marshall, A. Garner, S. N. Heine. N. S. Schulz, R. K. Heilmann, B. Ramsey and D. L. Windt, 'Soft X-ray polarimetry with the REDSoX Polarimeter and beyond', Proc. SPIE, 11118 (2019); doi: 10.1117/12.2529546

5. K. K. Madsen, F. Harrison, D. Broadway, F. E. Christensen, M. Descalle, D. Ferreira, B. Grefenstette, D. Gurgew, A. Hornschemeier, H. Miyasaka, T. Okajima, S. Pike, M. Pivovaroff, T. Saha, D. Stern, J. Vogel, D. Windt and W. Zhang, 'Optical instrument design of the high-energy x-ray probe (HEX-P)', Proc. SPIE, 10699, 106996M (2018); doi:10.1117/12.2314117
6. S. Zucconi, D. Garoli, M. G. Pelizzo, P. Nicolosi, S. Fineschi, and D. L. Windt, 'Multilayer coatings for multiband spectral observations', Proc. SPIE, 10567, 105673J (2017)
7. S. N. T. Heine, H. L. Marshall, R. K. Heilmann, N. S. Schulz, K. Beeks, F. Drake, D. Gaines, S. Levey, D. L. Windt and E. M. Gullikson, 'Laboratory progress in soft X-ray polarimetry', Proc. SPIE, 10399, 1039916 (2017)
8. H. L. Marshall, N. S. Schulz, S. N. T. Heine, R. K. Heilmann, H. M. Günther, M. Egan, T. Hellikcson, M. Schattenburg, D. Chakrabarty, D. L. Windt, E. M. Gullikson, B. D. Ramsey, M. Weisskopf, G. Tagliaferri, G. Pareschi, A. Marscher and S. Jorstad, 'The rocket experiment demonstration of a soft X-ray polarimeter (REDSoX Polarimeter)', Proc. SPIE, 10397, 103970K (2017)
9. S. L. O'Dell, R. Allured, A. O. Ames, M. P. Biskach, D. M. Broadway, R. J. Bruni, D. N. Burrows, J. Cao, B. D. Chalifoux, K.-W. Chan, Y.-W. Chung, V. Cotroneo, R. F. Elsner, J. A. Gaskin, M. V. Gubarev, R. K. Heilmann, E. Hertz, T. N. Jackson, K. Kilaru, J. J. Kolodziejczak, R. S. McClelland, B. D. Ramsey, P. B. Reid, R. E. Riveros, J. M. Roche, S. E. Romaine, T. T. Saha, M. L. Schattenburg, D. A. Schwartz, E. D. Schwartz, P. M. Solly, S. E. Trolier-McKinstry, M. P. Ulmer, A. Vikhlinin, M. L. Wallace, X. Wang, D. L. Windt, Y. Yao, S. Ye, W. W. Zhang and H. Zuo, 'Toward large-area sub-arcsecond x-ray telescopes II', Proc. SPIE, 9965, 996507 (2016)
10. D. L. Windt, 'Advancements in hard X-ray multilayers for X-ray astronomy', Proc. SPIE, 9603, 96031C (2015)
11. D. L. Windt and R. Conley, 'Two-dimensional differential deposition: figure correction of thin-shell mirror substrates for X-ray astronomy', Proc. SPIE, 9603, 96031H (2015)
12. H. L. Marshall, N. S. Schulz, D. L. Windt, E. M. Gullikson, M. Craft, E. Blake and C. Ross, 'The use of laterally graded multilayer mirrors for soft X-ray polarimetry', Proc. SPIE, 9603, 960319 (2015)
13. D. L. Windt, 'EUV multilayer coatings for solar imaging and spectroscopy', Proc. SPIE, 9604, 96040P (2015)
14. H. L. Marshall, N. S. Schulz, D. L. Windt, E. M. Gullikson, E. Blake, D. Getty, Z. McInturff, 'The use of laterally-graded multilayer mirrors for soft X-ray polarimetry', Proc. SPIE, 9144 (2014)
15. H. L. Marshall, N. S. Schulz, B. Remlinger, E. Gentry, D. L. Windt, E. M. Gullikson, 'Broad-band soft X-ray polarimetry', Proc. SPIE, 8861 (2013)
16. R. Dietsch, M. Krämer, A. Gottwald, E. M. Gullikson, T. Holz, F. Scholze, D. Weißbach, D. Windt, 'Tackling the demands from new X-ray sources types with tailored multilayer optics', Proc. SPIE, 8848-23 (2013)
17. D. Martínez-Galarce, R. Soufli, D. L. Windt, M. Bruner, E. Gullikson, S. Khatri, J. Robinson, S. Baker and E. Prast, 'Microroughness measurements and EUV calibration of the Solar Ultraviolet Imager mirrors', Proc. SPIE, 8501-85010I (2012)
18. R. Soufli, E. A. Spiller, D. L. Windt, J. C. Robinson, A. L. Aquila, F, J. Dollar, E. M. Gullikson, L. Rodriguez de Marcos, J. A. M. Morales, M. Fernandez-Perea, J. I. Larruquert, L. Golub, P. Boerner, 'In-band and out-of-band reflectance calibrations of the EUV telescope mirrors of the atmospheric imaging assembly (AIA) instrument aboard the Solar Dynamics Observatory (SDO)', Proc. SPIE, 8443-84433C (2012)
19. V. Polito, A. J. Corso, P. Zuppella, P. Nicolosi, S. Fineschi, E. Antonucci, D. L. Windt, M.-G. Pelizzo, 'Radiometric model of METIS coronagraph telescope on board of the Solar Orbiter Mission', Proc. SPIE 8443-84433G (2012)
20. K.-W. Chan, W. W. Zhang, M.-L. N. Hong, M. V. Sharpe, D. L. Windt, V. H. Dwivedi, 'Reflective coating for lightweight x-ray optics', Proc. SPIE, 8443-8443S (2012)
21. F. E. Christensen, A. C. Jakobsen, N. F. Brejnholt, K. K Madsen, A. Hornstrup, N. J.Westergaard, J. Momberg, J. Koglin, A. M. Fabricant, M. Stern, W. W. Craig, M. J. Pivovaroff, D. Windt, 'Coatings for the NuSTAR mission', Proc. SPIE, 8147, 81470U (2011)
22. P. Zuppella, A.J. Corso, P. Nicolosi, D.L. Windt, M.G. Pelizzo, 'Innovative multilayer coatings for space solar physics: performances and stability over time', Proc. SPIE, 8076, 807608 (2011)

23. G. Monaco, A. J. Corso, P. Zuppella, P. Nicolosi, D.L. Windt, M.G. Pelizzo, 'Thermal analysis experiment to evaluate the stability of multilayer coatings in a space environment close to the sun', Proc. SPIE, 8077, 80770E (2011)

24. D. L. Windt and J. A. Bellotti, 'SiC/Al multilayers for normal incidence EUV applications', Proc. SPIE, 7437, 743714 (2009)

25. J. A. Bellotti and D. L. Windt, 'Depth-graded Co/C multilayers prepared by reactive sputtering', Proc. SPIE, 7437-743715 (2009)

26. M. G. Pelizzo, M. Suman, D. L. Windt, G. Monaco, P. Nicolosi, 'Innovative methods for optimization and characterization of multilayer coatings', Proc. SPIE, 7360, 73600Q (2009)

27. M. Suman, M. G. Pelizzo, D. L. Windt, E. Gullikson, P. Nicolosi, 'Design of innovative multilayer coatings for solar imaging and spectroscopy', Proc. SPIE, 7360, 73600T (2009)

28. P. Gorenstein, W. Cash, N. Gehrels, K. Gendreau, J. Krizmanic, M. Coleman Miller, C. S. Reynolds, R. M. Sambruna, G. K. Skinner, R. E. Streitmatter, and D. L. Windt, 'The future of high angular resolution x-ray astronomy', Proc. SPIE, 7011, 70110U (2008)

29. G. K. Skinner, Z. Arzoumanian, W. C. Cash, N. Gehrels, K. C. Gendreau, P. Gorenstein, J. F. Krizmanic, M. C. Miller, J. D. Phillips, R. D. Reasenberg, C. S. Reynolds, R. M. Sambruna, R. E. Streitmatter, D. L. Windt, 'The milli-arc-second structure imager (MASSIM): a new concept for a high angular resolution x-ray telescope', Proc. SPIE, 7011, 70110T (2008)

30. D. L. Windt, 'Reduction of stress and roughness by reactive sputtering in W/B_4C multilayer films', Proc. SPIE 6688, 66880R (2007)

31. S. Zucconi, D. Garoli, M. G. Pelizzo, P. Nicolosi, S. Fineschi, D. L. Windt, 'Multilayer coatings for multiband spectral observations', Proc. 6th International Conference on Space Optics, ESTEC, Noordwijk, The Netherlands (2006)

32. B. Kjornrattanawanich, D. L. Windt, Yu. A. Uspenskii, and J. F. Seely, 'Optical constants determination of neodymium and gadolinium in the 3 nm to 100 nm wavelength range', Proc. SPIE, 6317, 63170U (2006)

33. J. F. Seely, Y. A. Uspenskii, B. Kjornrattanawanich, and D. L. Windt, 'Coated photodiode technique for the determination of the optical constants of reactive elements: La and Tb', Proc. SPIE, 6317, 63170T (2006)

34. Yu. A. Uspenskii, J. F. Seely, B. Kjornrattanawanich, D. L. Windt, Ye. A. Bugayev, V. V. Kondratenko, I. A. Artyukov, A. A. Titov, E. T. Kulatov, and A. V. Vinogradov, 'Determination of the optical constants of amorphous carbon in the EUV spectral region 40-450 eV', Proc. SPIE, 6317, 631713 (2006)

35. J. L. Culhane, G. A. Doschek, T. Watanabe, A. Smith, C. Brown, H. Hara, L. K. Harra, A. M. James, K. al Janabi, B. Kent, C. Korendyke, J. Lang, J. Mariska, S. Myers, J. Seely, G. Simnett, J. Tandy, R. Thomas, D. L. Windt, 'The extreme UV imaging spectrometer for the JAXA Solar-B mission', Proc. SPIE, 6266, 62660T

36. R. Soufli, D. L. Windt, J. C. Robinson, E. Spiller, F. J. Dollar, A. L. Aquila, E. M Gullikson, B. Kjornrattanawanich, J. F. Seely and L. Golub, 'Development and testing of EUV multilayer coatings for the Atmospheric Imaging Assembly instrument about the Solar Dynamics Observatory', Proc. SPIE, 5901, 59010M (2005)

37. A. D. Rousseau, D. L. Windt, B. Winter, L. Harra, H. Lamoureux, and F. Eriksson, 'Stability of EUV multilayers to long-term heating, and to energetic protons and neutrons, for extreme solar missions', Proc. SPIE, 5900, 590004 (2005)

38. Yu. A. Uspenskii, J. F. Seely, N. Popov, I. Artioukov, A. Vinogradov, D. L. Windt and B. Kjornrattanawanich, 'Extreme UV optical constants of rare-earth metals free from effects of air contamination', Proc. SPIE, 5919, 59190S (2005)

39. B. Kjornrattanawanich, R. Soufli, S. Bajt, D. Windt, J. F. Seely, 'An assessment of yttrium optical constants at EUV wavelengths', Proc. SPIE, 5538, 17 (2004)

40. J. Seely, L. Goray, D. Windt, B. Kjornrattanawanich, Y. Uspenskii, and A. Vinogradov, 'Extreme ultraviolet optical constants for the design and fabrication of multilayer-coated gratings', Proc. SPIE, 5538, 43 (2004)

41. J. E. Koglin, C. M. Hubert, J. Chonko, F. E. Christensen, W. W. Craig, T. R. Decker, C. J. Hailey, F. A. Harrison, C. P. Jensen, K. K. Madsen, M. Pivovoroff, M. Stern, D. L. Windt, and E. Ziegler, 'Hard X-ray Optics: from HEFT to NuSTAR', Proc. SPIE, 5488, 856 (2004)

42. K. C. Gendreu, W. Cash, P. Gorenstein, D. Windt, P. Kaaret, C. Reynolds, 'MAXIM: the black hole imager', Proc. SPIE 5488, 394 (2004)

43. D. L. Windt, S. Donguy, J. Seely, B. Kjornrattanawanich, E. M. Gullikson, C. C. Walton, L. Golub, E. DeLuca, 'EUV multilayers for solar physics', Proc. SPIE, 5168, 1 – 11 (2003)

44. J. Seely, D. L. Windt, S. Donguy, C. Brown, G. Holland, W. Hunter, M. Kowalski, B. Kjornrattanawanich, G. Doschek, J. Mariska, C. Korendyke, and K. Dere, 'Performance of multilayer-coated gratings for the extreme-ultraviolet imaging spectrometer (EIS) for the Solar-B mission', Proc. SPIE, 5168, 12 – 20 (2003)

45. D. L. Windt, S. Donguy, C. J. Hailey, J. Koglin, V. Honkimaki, E. Ziegler, F. E. Christensen, F. A. Harrison 'Optical constants for hard x-ray multilayers over the energy range E=35 – 180 keV', Proc. SPIE, 5168, 35 – 40 (2003)

46. J. E. Koglin, H. Chen, J. Chonko, F. E. Christensen, W. W. Craig, T. R. Decker, K. Gunderson, C. J. Hailey, F. A. Harrison, C. P. Jensen, K. K. Madsen, M. Stern, D. L. Windt, H. Yu, E. Ziegler, 'Production and calibration of the first HEFT hard X-ray optics module', Proc. SPIE, 5168, 100 – 111 (2003)

47. F. A. Harrison, S. E. Boggs, F. E. Christensen, N. A. Gehrels, J. E. Grindlay, C. M. H. Chen, W. W. Craig, C. J. Hailey, P. Pinto, S. Thorsett, J. Tueller, D. L. Windt, S. E. Woosley, 'High-resolution spectroscopic imaging (HSI) mission', Proc. SPIE, 4851, 345 (2003)

48. D. L. Windt, S. M. Kahn, G. E. Sommargren, 'Diffraction-limited astronomical X-ray imaging and X-ray interferometery using normal-incidence multilayer optics', Proc. SPIE, 4851, 441 – 450 (2003)

49. C. J. Hailey, F. E. Christensen, W. W. Craig, F A. Harrison, J. Koglin, R. Petre, D. L. Windt, W. W. Zhang, 'Overview of segmented glass optics development for the Constellation-X hard X-ray telescope', Proc. SPIE, 4851, 519 (2003)

50. J. E. Koglin, F. E. Christensen, J. Chonko, W. W. Craig, T. R. Decker, M. A. Jimenez-Garate, K. S. Gunderson, C. J. Hailey, F. A. Harrison, C. P. Jensen, M. Sileo, D. L. Windt, H. Yu, 'Development and production of hard X-ray multilayer optics for HEFT', Proc. SPIE, 4851, 607 (2003)

51. D. L. Windt, S. Donguy, C. J. Hailey, J. Koglin, V. Honkimaki, E. Ziegler, F. E. Christensen, C. M. H. Chen, F. A. Harrison, W. W. Craig, 'W/SiC X-ray multilayers optimized for use above 100 keV', Proc. SPIE, 4851, 639 – 646, (2003)

52. J. E. Koglin, H. C. Chen, F. E. Christensen, J. Chonko, W. W. Craig, T. R. Decker, M. A. Jimenez-Garate, C. J. Hailey, F. A. Harrison, C. P. Jensen, M. Sileo, D. L. Windt, H. Yu, 'Development of precision hard x-ray multilayer optics with sub-arcminute performance', Proc. SPIE, 4851, 673 (2003)

53. C. M. Hubert Chen, Finn E. Christensen, Fiona A. Harrison, Peter H. Mao, David L. Windt, 'Design of a soft gamma-ray focusing telescope for the study of nuclear lines', Proc. SPIE, 4851, 1356 (2003)

54. D. L. Windt, S. M. Kahn and G. E. Sommargren, 'Diffraction-limited astronomical X-ray imaging and soft X-ray interferometry using multilayer optics', BAAS, 34, 744 (2002)

55. D. L. Windt and G. E. Sommargren, 'Diffraction-limited astronomical X-ray imaging using multilayer optics', BAAS, 33, S450 (2001)

56. P. H. Mao, L. M. Bellan, F. A. Harrison, D. L. Windt, F. E. Christensen, 'Evaluation and optimization of multilayer designs for astronomical x-ray telescopes using a field-of-view- and energy-dependent figure of merit', Proc. SPIE, 4138, 126 (2000)

57. F. E. Christensen, J. M. Chakan, F. A. Harrison, S. E. Boggs, P. H. Mao, T. Prince, W. W. Craig, C. J. Hailey, and D. L. Windt, 'Grazing incidence optics designs for future gamma-ray missions', Proc. SPIE, 4012, 278-283 (2000)

58. D. L. Windt, F. Christensen, W. Craig, C. Hailey, F. Harrison, M. Jimenez-Garate, R. Kalyanaraman, and P. Mao, 'X-ray multilayer coatings for use at energies above 100 keV', Proc. SPIE, 4012, 442-447 (2000)

59. F. E. Christensen, W. W. Craig, C. J. Hailey, M. A. Jimenez-Garate, D. L. Windt, F. A. Harrison, P. H. Mao, E. Ziegler, V. Honkimaki, M. S. Del Rio, A. K. Freund, M. Ohler, 'Hard X-ray characterization of a HEFT single reflection prototype', Proc. SPIE, 4012, 626-638 (2000)

60. F. A. Harrison, S. E. Boggs, A. Bolotnikov, F. E. Christensen, W. R. Cook, W. W. Craig, C. J. Hailey, M. Jimenez-Garate, P. H. Mao, S. E. Schindler, and D. L. Windt, 'Development of the High-Energy Focusing Telescope (HEFT) baloon experiment', Proc. SPIE, 4012, 693-699 (2000)

61. F. A. Harrison, W. R. Cook, F. E. Christensen, O. Citterio, W. W. Craig, N. Gehrels, P. Gorenstein, J. E. Grindlay, C. J. Hailey, R. A. Kroeger, H. Kuneida, G. Paraschi, A. M. Parsons, R. Petre, S. E. Romaine, B. D. Ramsey, J. Tueller, M. Ulmer, M. C. Weisskopf, and D. L. Windt, 'Technology development for the Constellation-X hard X-ray telescope', *Proc. SPIE*, 3765, 104 – 111 (1999)

62. A. M. Hussain, F. E. Christensen, M. A. Jimenez-Garate, W. W. Craig, C. J. Hailey, T. R. Decker, M. Stern, D. L. Windt, P. H. Mao, F. A. Harrison, G. Pareschi, M. Sanchez del Rio, A. Souvorov, A. K. Freund, R. Tucoulou, A. Madsen, C. B. Mammen, 'X-ray scatter measurements from thermally slumped thin glass substrates for the HEFT hard x-ray telescopes', Proc. SPIE, 3766, 184 (1999)

63. D. L. Windt, J. Dalla Torre, G. H. Gilmer, J. Sapjeta, R. Kalyanaraman, F. H. Baumann, P. L. O'Sullivan, D. Dunn, R. Hull, 'Growth and structure of metallic barrier layer and interconnect films I: experiments', Proc. MRS, 564, 307 – 312 (1999).

64. J. Dalla Torre, G. H. Gilmer, D. L. Windt, F. H. Baumann, R. Kalyanaraman, Hanchen Huang, T. Díaz de la Rubia, and M. Djafari Rouhani, 'Growth and structure of metallic barrier layer and interconnect films II: atomistic simulations of film deposition onto inclined surfaces', Proc. MRS, 562, 129 (1999)

65. D. L. Windt, 'Multilayer films for figured x-ray optics', Proc. SPIE, 3448, 280 – 290 (1998)

66. R. A. Cirelli, M. Mkrtchyn, G. P. Watson, L. E. Trimble, G. R. Weber, D. L. Windt, and O. Nalamasu, 'A new variable transmission illumination technique optimized with design rule criteria', Proc. SPIE, 3334, 395 (1998)

67. R. Farrow, M. Blakey, R. Kasica, J. A. Liddle, M. Mkrtchyan, A. E. Novembre, M. Peabody, T. Saunders, and D. L. Windt, 'Defect inspection and linewidth measurement of SCALPEL thin membrane masks using optical transmission', Proc. SPIE, 3334, 221 (1998)

68. M. L. Peabody, M. I. Blakey, R. C. Farrow, R. Kasica, J. A. Liddle, A. E. Novembre, T. Saunders, D. M. Tennant, and D. L. Windt, 'Yield, metrology, and inspection characteristics of SCALPEL masks', Proc. SPIE, 3236, 190 (1997)

69. W. K. Waskiewicz, L. R. Harriott, S. D. Berger, C. Biddick, M. Blakey, S. Bowler, K. Brady, W. Connelly, A. Crorken, J. Custy, R. DeMarco, R. Farrow, J. Felker, L. Hopkins, H. Huggins, C. Knurek, J. Krauss, R. Freeman, J. Liddle, M. Mkrtchyn, A. Novembre, M. Peabody, R. Tarascon, H. Wade, G. Watson, K. Werder, D. L. Windt, 'SCALPEL proof of concept system: preliminary lithography results', Proc. SPIE, 3048, 255 (1997)

70. D. L. Windt, `Stresses in Mo/Si and W/Si multilayers', Proceedings of the 3rd International Conference on the Physics of X-Ray Multilayers, (University of Arizona, Tucson, AZ, 1996)

71. D. L. Windt, `Multilayer deposition on large-area, figured X-ray optics', Proceedings of the 3rd International Conference on the Physics of X-Ray Multilayers, (University of Arizona, Tucson, AZ, 1996)

72. L. R. Harriott, S. D. Berger, C. Biddick, M. I. Blakey, S. W. Bowler, K. Brady, R. M. Camarda, W. Connelly, A. Crorken, J. Custy, R. DeMarco, R. C. Farrow, J. A. Felker, L. Fetter, R. Freeman, L. Hopkins, H. A. Huggins, C. S. Knurek, J. S. Kraus, J. A. Liddle, M. Mkrtchyan, A. E. Novembre, M. L. Peabody, R. G. Tarascon, H. H. Wade, W. K. Waskiewicz, G. P. Watson, K. S. Werder, D. L. Windt, `The SCALPEL proof of concept system', Microelectronic Engineering, December (1996)

73. A. A. MacDowell, Z. Shen, K. Fujii, J. E. Bjorkholm, R. R. Freeman, L. Fetter, D. W. Taylor, D. M. Tennant, L. Eichner, W. K. Waskiewicz, D. L. White, D. L. Windt, O. R. Wood, S. Hany, T. Jewell, `Extreme ultraviolet 1:1 ring field lithography machine', in Optical Soceity of America Trends in Optics and Photonics Vol. 4, EUV Lithography, Glenn D. Kubiak and Don R. Kania Editors, (Optical Society of America, Washington D. C. 1996), 192-198

74. D. L. Windt, `Multilayer coatings for large-area X-ray optics', Proceedings of the 2nd U.S.-Japan Workshop on X-Ray Optics, (Office of Naval Research Asian Office, 1996)

75. H. A. Huggins, K. J. Bolan, J. A. Liddle, M. L. Peabody, Jr., R. G. Tarascon-Auriol, D. L. Windt, 'Fabrication processes for SCALPEL mask blanks', Proc. SPIE, 2621, 247 (1995)

76. K. B. Nguyen, A. K. Ray-Chaudhuri, D. A. Tichenor, R. H. Stulen, R. Nissen, K. W. Berger, P. H. Paul, D. M. Tennant, L. A. Fetter, D. L. Windt, J. E. Bjorkholm, and R. R. Freeman, `Printability of substrate and absorber defects on extreme ultraviolet lithographic masks', Proc. SPIE, 2437, 331-339, (1995)

77. D. L. Windt, W. L. Brown, C. A. Volkert, and W. K. Waskiewicz, `Dependence of stress on background pressure in sputtered Mo/Si multilayer films', Proc. of MRS Symposium on Thin Films: Stresses and Mechanical Properties V, (Materials Research Society, Pittsburgh, 1995), 356, 137-142

78. D. L. Windt, W. K. Waskiewicz, `Multilayer facilities required for EUV lithography', OSA Proceedings on Extreme Ultraviolet Lithography, Frits Zernike and David Attwood, eds., (Optical Society of America, Washington D. C. 1995), 23, 47-51

79. O. R. Wood, II, J. E. Bjorkholm, K. F. Dreyer, L. E. Fetter, M. D. Himel, R. R. Freeman, D. M. Tennant, J. E. Griffith, G. N. Taylor, W. K. Waskiewicz, D. L. White, D. L. Windt, A. A. MacDowell, `Experiments and simulations of EUV lithographic resist patterning at wavelengths from 7 to 40 nm', OSA Proceedings on Exterme Ultraviolet Lithography, Frits Zernike and David Attwood, eds., (Optical Society of America, Washington D. C. 1995), 23, 83-88

80. D. A. Tichenor, G. D. Kubiak, M. E. Malinowski, R. H. Stulen, S. J. Haney, K. W. Berger, R. P. Nissen, G. A. Wilkerson, P. H. Paul, R. W. Arling, A. K. Ray-Chaudhuri, W. C. Sweatt, W. W. Chow, J. E. Bjorkholm, R. R. Freeman, M. D. Himel, A. A. MacDowell, W. K. Waskiewicz, D. L. White, D. L. Windt, and T. E. Jewell, `10X reduction imaging at 13.4 nm', OSA Proceedings on Exterme Ultraviolet Lithography, Frits Zernike and David Attwood, eds., (Optical Society of America, Washington D. C. 1995), 23, 89-97

81. Z. Tan, A. A. MacDowell, B. LaFontaine, J. Russo, J. Bjorkholm, D. M. Tennant, D. W. Taylor, M. D. Himel, O. R. Wood, II, R. R. Freeman, W. K. Waskiewicz, D. L. White, S. Spector, A. Ray-Chaudhuri, R. H. Stulen, W. Ng, F. Cerrina, `At-wavelength metrology of EUVL cameras using phase-measuring, lateral-shearing interferometry', OSA Proceedings on Exterme Ultraviolet Lithography, Frits Zernike and David Attwood, eds., (Optical Society of America, Washington D. C. 1995), 23, 151-160

82. D. A. Tichenor, G. D. Kubiak, M. E. Malinowski, R. H. Stulen, S. J. Haney, K. W. Berger, R. P. Nissen, G. A. Wilkerson, P. H. Paul, S. R. Birtola, P. S. Jin, W. C. Sweatt, W. W. Chow, J. E. Bjorkholm, R. R. Freeman, M. D. Himel, A. A. MacDowell, D. M. Tennant, O. R. Wood II, W. K. Waskiewicz, D. L. White, D. L. Windt, T. E. Jewell, R. W. Arling, `Development of a laboratory extreme-ultraviolet lithography tool', Proc. SPIE, 2194, 95 (1994)

83. D. A. Tichenor, G. D. Kubiak, M. E. Malinowski, R. H. Stulen, S. J. Haney, K. W. Berger, R. P. Nissen, R. L. Schmitt, G. A. Wilkerson, P. S. Jin, W. C. Sweatt, W. W. Chow, J. E. Bjorkholm, R. R. Freeman, M. D. Himel, A. A. MacDowell, D. M. Tennant, O. R. Wood II, W. K. Waskiewicz, D. L. White, D. L. Windt, T. E. Jewell, 'Application of laser plasma sources in soft x-ray projection lithography', Proc. SPIE, 2015, 104 (1994)

84. C. A. Volkert, D. L. Windt, W. K. Waskiewicz, J. A. Liddle and H. A. Huggins,`Stress in multilayers and thin films', in The Physics of X-Ray Multilayer Structures, 1994 Technical Digest Series, Vol. 6 (Optical Society of America, Washington, DC, 1994) p. 101

85. D. L. Windt, W. K. Waskiewicz and J. Griffith, `The correlation between reflectance and substrate roughness of multilayer X-ray optics', in The Physics of X-Ray Multilayer Structures, 1994 Technical Digest Series, Vol. 6 (Optical Society of America, Washington, DC, 1994) pp. 114-116

86. R. Freeman, J. E. Bjorkholm, L. Eichner, L. Fetter, M. Himel, B. LaFontaine, A. MacDowell, Z. Tan, D. W. Taylor, D. M. Tennant, W. K. Waskiewicz, D. L. White, D. L. Windt, O. R. Wood, J. Kortright, K. Nguyen, P. Takacs, J. Bruning, T. Jewell, `Extreme Ultraviolet Projection Lithography', 1994 NSLS Annual Report

87. O. R. Wood II, R. M. D'Souza, M. Himel, J. E. Bjorkholm, K. Early, L. A. Fetter, R. R. Freeman, L. H. Szeto, D. E. Tennant, D. W. Taylor, T. E. Jewell, D. Lee, A. R. Neureuther, D. M. Newmark, A. A. MacDowell, L. Eichner, W. K. Waskiewicz, D. L. White, D. L. Windt, D. M. Williamson, and F. Zernike, `Simulation of soft X-ray images from a 1:1 ring field optic', in Soft X-Ray Projection Lithography Technical Digest, Optical Society of America, Washington D.C., 3-6 (1993)

88. D. L. Windt, W. K. Waskiewicz, J. Griffith, and J. E. Bjorkholm, `Surface finish requirements for SXPL optics', in Soft X-Ray Projection Lithography Technical Digest, Optical Society of America, Washington D. C., 32-35 (1993)

89. D. A. Tichenor, G. D. Kubiak, M. E. Malinowski, R. H. Stulen, S. J. Haney, K. W. Berger, R. P. Nissen, R. L. Schmitt, G. A. Wilkerson, L. A. Brown, P. A. Spence, P. S. Jin, W. C. Sweatt, W. W. Chow, J. E. Bjorkholm, R. R. Freeman, M. D. Himel, A. A. MacDowell, D. M. Tennant, O. R. Wood, II, W. K. Waskiewicz, D. L. White, D. L. Windt, andT. E. Jewell, `Development and characterization of a 10X Schwarzschild system for soft X-ray projection lithography', in Soft X-Ray Projection Lithography Technical Digest, Optical Society of America, Washington D. C., 45-48 (1993)

90. P. D. Rockett, J. A. Hunter, R. E. Olsen, W. C. Sweatt, G. D. Kubiak, K. W. Berger, R. L. Schmitt, H. Shields, M. Powers, and D. L. Windt, `The investigation of discharge-laser-driven plasmas as sources for soft X-ray projection lithography', in Soft X-Ray Projection Lithography Technical Digest, Optical Society of America, Washington D. C., 134-137 (1993)

91. D. L. White, J. E. Bjorkholm, J. Bokor, L. Eichner, R. R. Freeman, T. E. Jewell, W. M. Mansfield, A. A. MacDowell, L. H. Szeto, D. M. Tennant, W. K. Waskiewicz, D. L. Windt, O. R. Wood,II, `Soft X-ray projection lithography', Solid State Technology May 1992

92. D. L. White, J. E. Bjorkholm, J. Bokor, L. Eichner, R. R. Freeman, T. E. Jewell, W. M. Mansfield, A. A. MacDowell, L. H. Szeto, D. M. Tennant, W. K. Waskiewicz, D. L. Windt, O. R. Wood,II, `Soft X-ray projection lithography', Optics & Photonics News, May 1992

93. J. B. Kortright, K. Nguyen, P. Denham, and D. L. Windt, `Controlling short wavelength X-ray multilayer period variations on focussing optics', in Soft X-Ray Projection Lithography Technical Digest 1992, Optical Society of America, Washington D.C., 8, 46-49 (1992)

94. D. A. Tichenor, G. D. Kubiak, M. E. Malinowski, R. H. Stulen, S. J. Haney, K. W. Berger, L. A. Brown, W. C. Sweatt, J. E. Bjorkholm, R. R. Freeman, M. D. Himel, A. A. MacDowell, D. M. Tennant, O. R. Wood, II, J. Bokor, T. E. Jewell, W. M. Mansfield, W. K. Waskiewicz, D. L. White, and D. L. Windt,, `Soft X-ray projection lithography experiments using Schwarzschild imaging optics', in Soft X-Ray Projection Lithography Technical Digest 1992, Optical Society of America, Washington D.C., 8, 70-71 (1992)

95. D. M. Tennant, L. A. Fetter, L. R. Harriott, A. A. MacDowell, P. P. Mulgrew, J. Z. Pastalan, W. K. Waskiewicz, D. L. Windt, and 0. R. Wood, II, `Mask technologies for soft X-ray projection lithography at 13 nm', in Soft X-Ray Projection Lithography Technical Digest 1992, Optical Society of America, Washington D.C., 8, 46-49 (1992)

96. A. A. MacDowell, J. E. Bjorkholm, K. Early, R. R. Freeman, M. Himel, P. P. Mulgrew, L. H. Szeto, D. W. Taylor, D. M. Tennant, 0. R. Wood, II, J. Bokor, L. Eichner, T. E. Jewell, W. K. Waskiewicz, D. L. White, D. L. Windt, and F. Zernike, `Soft X-ray projection imaging using a 1:1 ring-field optic', in Soft X-Ray Projection Lithography Technical Digest 1992, Optical Society of America, Washington D.C., 8, 75-78 (1992)

97. D. L. Windt, R. R. Kola, W. K. Waskiewicz, R. Hull, J. Griffith, and D. A. Grigg, `Stress, morphology, and optical properties of Mo/Si X-ray multilayers', in Physics of X-Ray Multilayer Structures Technical Digest 1992, Optical Society of America, Washington D.C., 7, 12-15 (1992)

98. R. Hull, D. L. Windt, R. R. Kola, and W. K. Waskiewicz, `High resolution electron microscope imaging and quantification of interface structure in X-ray multilayers ', in Physics of X-Ray Multilayer Structures Technical Digest 1992, Optical Society of America, Washington D.C., 7, 90-93 (1992)

99. D. J. Eaglesham and D. L. Windt, `Interface roughness and void formation in Si deposition at low temperature', in Physics of X-Ray Multilayer Structures Technical Digest 1992, Optical Society of America, Washington D.C., 7, 121-124 (1992)

100. M. H. Sher, U. Mohideen, H. W. K. Tom, 0. R. Wood, G. D. Aumiller, D. L. Windt, W. K. Waskiewicz, J. Sugar, T. J. McIlrath, and R. R. Freeman, `Picosecond soft X-ray pulse length measurement by pump-probe absorption spectroscopy', Proc. 8th Int'l. Conf. on Ultrafast Phenomenon (1992)

101. D. J. Eaglesham, H-J Gossman, M. Cerullo, L. Pfeiffer, D. L.Windt, `Limited-Thickness Epitaxy of Semiconductors Down to Room Temperature', Proc. 7th Int'l. Conf. on Microscopy of Semiconductors (1992)

102. O. R. Wood,II, J. E. Bjorkholm, J. Bokor, L. Eichner, R. R. Freeman, T. E. Jewell, W. M. Mansfield, A. A. MacDowell, L. H. Szeto, D. M. Tennant, W. K. Waskiewicz, D. L. White, D. L. Windt, J. H. Bruning, `High resolution soft X-ray projection imaging', OSA Proc. on Soft X-Ray Projection Lithography, J. Bokor, Ed., Optical Society of America, Washington D.C., 12, 2-4 (1991)

103. D. A. Tichenor, G. D. Kubiak, M. E. Malinowski, R. H. Stulen, S. J. Haney, K. W. Berger, L. A. Brown, R. R. Freeman, W. M. Mansfield, O. R. Wood, II, D. M. Tennant, J. E. Bjorkholm, T. E. Jewell, D. L. White, D. L. Windt, and W. K. Waskiewicz, `Soft X-ray projection using a laser-plasma source', OSA Proc. on Soft X-Ray Projection Lithography, J. Bokor, Ed., Optical Society of America, Washington D.C., 12, 54-57 (1991)

104. D. L. Windt, R. Hull, W. K. Waskiewicz, `Interface Imperfections in Metal/Si X-Ray Multilayer Structures', OSA Proc. on Soft X-Ray Projection Lithography, J. Bokor, Ed., Optical Society of America, Washington D.C., 12, 82-86 (1991)

105. W. K. Waskiewicz, D. L. Windt, J. E. Bjorkholm, L. Eichner, R. R. Freeman, T. E. Jewell, W. M. Mansfield, A. A. MacDowell, L. H. Szeto, D. M. Tennant, D. L. White, O. R. Wood,II, `Achieving uniform multilayer coatings on figured optics', OSA Proc. on Soft X-Ray Projection Lithography, J. Bokor, Ed., Optical Society of America, Washington D.C., 12, 97-100 (1991)

106. W. M. Mansfield, J. E. Bjorkholm, A. A. MacDowell, R. R. Freeman, L. H. Szeto, G. Taylor, D. M. Tennant, W. K. Waskiewicz, D. L. Windt, D. L. White, O. R. Wood, II, R. M. D'Souza, and A. R. Neureuther, `Effects

of absorption on resist performance in soft X-ray projection lithography', OSA Proc. on Soft X-Ray Projection Lithography, J. Bokor, Ed., Optical Society of America, Washington D.C., 12, 129-131 (1991)

107. D. L. Windt and W. K. Waskiewicz, `Soft X-Ray Reflectometry of Multilayer Coatings Using a Laser-Plasma Source', Proc. SPIE, 1547, 144-158 (1992)

108. A. A. MacDowell, J. E. Bjorkholm, J. Bokor, L. Eichner, R. R. Freeman, T. E. Jewell, W. M. Mansfield, J. Pastalan, L. H. Szeto, D. M. Tennant, W. K. Waskiewicz, D. L. White, D. L. Windt, O. R. Wood, II, `Reduction imaging with soft X-rays for projection lithography', Proceedings of 4th international Synchrotron Radiation Instrumentation Conf. (1991)

109. D. M. Tennant, J. E. Bjorkholm, L. Eichner, R. R. Freeman, T. E. Jewell, A. A. MacDowell, J. Z. Pastalan, L. H. Szeto, D. Taylor, W. K. Waskiewicz, D. L. White, D. L. Windt, O. R. Wood, II, `Comparison of reflective mask technologies for soft X-ray projection lithography, Proc. SPIE, 1604, 91 (1992)

110. D. L. White, M. M. Becker, J. Bokor, J. E. Bjorkholm, L. Eichner, R. R. Freeman, T. E. Jewell, W. M. Mansfield, A. A. MacDowell, M. L. O'Malley, E. L. Raab, L. H. Szeto, D. M. Tennant, W. K. Waskiewicz, D. L. Windt, and O. R. Wood, II, `Soft x-ray projection lithography: experiments and practical printers', Proc. SPIE, 1343, 204-213 (1991)

111. G. N. Taylor, R. S. Hutton, W. M. Mansfield, and D. L. Windt, `Resist schemes for soft x-ray lithography', Proc. SPIE, 1343, 258- 273 (1991)

112. D. L. Windt, W. K. Waskiewicz, G. D. Kubiak, T. W. Barbee, and R. N. Watts, `XUV characterization comparison of Mo/Si multilayer coatings', Proc. SPIE, 1343, 274-282 (1991)

113. D. L. Windt, R. Hull, W. K. Waskiewicz, and J. B. Kortright, `Interface characterization of XUV multilayer reflectors using high-resolution transmission electron microscopy and XUV reflectance', Proc. SPIE, 1343, 292-308 (1991)

114. R. R. Freeman, S. Davey, D. L. Windt, T. J. McIlrath, H. M. Milchberg, W. E. Cooke, L. D. Van Woerkom, `The prospect for multiphoton effects using soft x-rays from laser-driven plasmas', Proc. of International Conference on Multiphoton Physics, Paris, September 1990

115. T. E. Jewell, M. Becker, J. E. Bjorkholm, J. Bokor, L. Eichner, R. R. Freeman, W. M. Mansfield, A. A. MacDowell, M. L. O'Malley, E. L. Raab, W. T. Silfvast, L. H. Szeto, D. M. Tennant, W. K. Waskiewicz, D. L. White, D. L. Windt, and O. R. Wood, II, `20:1 projection soft x-ray lithography using tri-level resists', Proc. SPIE, 1263, 90-98 (1990)

116. D. L. Windt and J. B. Kortright, `XUV optical characterization of thin film and multilayer reflectors', Proc. SPIE, 1160, 246-248 (1989)

117. R. C. Catura, J. R. Lemen, M. D. Morrison, D. L. Windt, and L. W. Acton, `X-ray calibration of a virtual phase 1024x1024 CCD', Proc. SPIE, 1159, 578-586 (1989)

118. D. L. Windt and R. C. Catura, `Multilayer characterization at LPARL', Proc. SPIE, 984, 82-88 (1988)

119. D. L. Windt, W. Cash, M. Scott, P. Arendt, B. Newnam, R. F. Fisher, A. B. Swartzlander, P. Z. Takacs, J. M. Pinneo, and J. B. Kortright, `Optical constants for 22 thin film materials in the 10 eV to 500 eV photon energy region', Proc. SPIE, 911, 122-129 (1988)

120. R. C. Catura, R. A. Stern, W. Cash, D. L. Windt, J. L. Culhane, J. Lappington, and K. Barnsdale, `X-ray objective grating spectrometer', Proc. SPIE, 830, 204-216 (1988)

121. D. L. Windt, `The optical properties of 21 thin film materials in the 10 eV to 500 eV photon energy region', Ph.D. Thesis, University of Colorado (1987)

122. M. L. Scott, P. N. Arendt, B. Cameron, R. Cordi, B. Newnam, D. L. Windt, and W. Cash `Metal reflectors in the EUV', Proc. SPIE, 691, 20-27 (1986)

123. D. L. Windt and W. Cash, `The soft x-ray/EUV calibration facility at the University of Colorado', Proc. SPIE, 689, 167-177 (1986)

124. M. Scott, P. Arendt, B. Cameron, B. Newnam, D. L. Windt, and W. Cash, `Extreme ultraviolet multilayer reflectors', OSA Proceedings of the 3rd Topical Meeting on Short Wavelength Coherent Radiation: Generation and Applications, Monterey, 24--26 March, 1986

125. D. L. Windt, W. Cash, and Wm. McClintock, `EUV telescope tolerance analysis', Proc. GSFC Glancing Incidence Optics Fabrication Workshop, Annapolis, Maryland 1-4 April, 1985

126. D. L. Windt and A. E. Decew, Jr., `Optics for EUV astronomy', Photonics Spectra, September 1985

127. D. L. Windt and W. Cash, `Laboratory evaluation of conical diffraction spectrographs', Proc. SPIE, 503, 98-105 (1984)