

## List of publications - Kamil Postava (12/2008)

### Articles in International Journals

1. K. Postava, D. Hrabovský, O. Životský, J. Pištora, N. Dix, R. Muralidharan, J. M. Caicedo, F. Sánchez, and J. Fontcuberta, “Magneto-optic material selectivity in self-assembled BiFeO<sub>3</sub>–CoFe<sub>2</sub>O<sub>4</sub> biferroic nanostructures,” *J. Appl. Phys.* **105**, (in press) (2009).
2. O. Životský, K. Postava, K. Hrabovská, A. Hendrych, J. Pištora, and L. Kraus, “Depth-sensitive characterization of surface magnetic properties of as-quenched FeNbB ribbons,” *Appl. Surf. Sci.* **255**, 3322–3327 (2008).
3. K. Postava, I. Sveklo, M. Tekielak, P. Mazalski, A. Maziewski, A. Stupakiewicz, M. Urbaniak, B. Szymański, and F. Stobiecki, “Material selective sensitivity of magneto-optical Kerr effect in NiFe/Au/Co/Au periodic multilayers,” *IEEE Trans. Magn.* **44**, (in press) (2008).
4. L. Kraus, O. Životský, K. Postava, P. Švec, and D. Janičkovič, “Exchange bias in surface-crystalline Fe-Nb-B ribbons,” *IEEE Trans. Magn.* **44**, (in press) (2008).
5. A. Lančok, K. Závěta, T. Kaňuch, M. Miglierini, J. Lančok, K. Postava, J. Kohout, O. Životský, and F. Fendrych, “Hyperfine interaction studies and magnetic properties of FeCoAlN nanocomposite films,” *Hyperfine Interact.* **183**, 171–177 (2008).
6. P. Mazalski, K. Postava, M. Tekielak, A. Maziewski, M. Urbaniak, B. Szymański, and F. Stobiecki, “Magneto-optical study of NiFe/Ai/Co/Au layers,” *Acta Physica Polonica A* (in press) (2008).
7. O. Životský, L. Kraus, K. Postava, K. Barčová, J. Pištora, Y. Jirášková, J. Juraszek, J. Teillet, P. Švec, and D. Janičkovič, “Surface and bulk magnetic properties of as-quenched FeNbB ribbons,” *J. Magn. Magn. Mater.* **320**, 1535–1540 (2008).
8. M. Foldyna, A. De Martino, E. Garcia-Caurel, R. Ossikovski, C. Licitra, F. Bertin, K. Postava, and B. Drevillon, “Critical dimension of biperiodic gratings determined by spectral ellipsometry and Mueller matrix polarimetry,” *Eur. Phys. J. Appl. Phys.* **42**, 351–359 (2008).
9. K. Postava, Y. Z. Gao, X. Y. Gong, L. Halagačka, J. Pištora, A. Nakaoka, and T. Yamaguchi, “Spectroscopic ellipsometry of anodized layer on InAsSb,” *Phys. Status Solidi C* **5**, 1316–1319 (2008).
10. L. Halagačka, K. Postava, M. Foldyna, and J. Pištora, “Precise phase modulation generalized ellipsometry of anisotropic samples,” *Phys. Status Solidi A* **205**, 752–755 (2008).
11. M. Foldyna, A. De Martino, E. Garcia-Caurel, R. Ossikovski, C. Licitra, F. Bertin, K. Postava, and B. Drevillon, “Monitoring critical dimensions of bidimensional gratings by spectroscopic ellipsometry and Mueller polarimetry,” *Phys. Status Solidi A* **205**, 806–809 (2008).

12. J. Kisielewski, K. Postava, I. Sveklo, A. Nedzved, P. Trzciński, A. Maziewski, B. Szymański, M. Urbaniak, and F. Stobiecki, “Magnetic Anisotropy of Co Films Annealed by Laser Pulses,” *Solid State Phenomena* **140**, 69–74 (2008).
13. O. Životský, F. Fendrych, L. Kraus, K. Postava, O. Chayka, L. Halagačka, and J. Pištora, “Soft magnetic properties of as-deposited FeCoAlN films studied using magneto-optic magnetometry,” *J. Magn. Magn. Mater.* **316**, e858–e861 (2007).
14. K. Postava, M. Aoyama, J. Mistrik, T. Yamaguchi, and K. Shio, “Optical measurements of silicon wafer temperature,” *Appl. Surf. Sci.* **254**, 416–419 (2007).
15. K. Postava, Z. Kurant, A. Maziewski, A. Stupakiewicz, L. Baczevski, A. Wawro, M. Aoyama, and T. Yamaguchi, “Influence of V and Mo overlayer on magneto-optical Kerr effect in ultrathin Co films,” *Appl. Surf. Sci.* **254**, 360–364 (2007).
16. M. Foldyna, K. Postava, D. Ciprian, and J. Pištora, “Modeling of magneto-optical properties of lamellar nanogratings,” *Journal of Alloys and Compounds* **434-435**, 581–583 (2007).
17. J. Hamrle, S. Blomeier, O. Gaier, B. Hillebrands, H. Schneider, G. Jakob, K. Postava, and C. Felser, “Huge quadratic magneto-optical Kerr effect in the Co<sub>2</sub>FeSi Heusler compound,” *J. Phys. D: Appl. Phys.* **40**, 1563–1569 (2007).
18. J. Hamrle, S. Blomeier, O. Gaier, B. Hillebrands, H. Schneider, G. Jakob, B. Reuscher, A. Brodyanski, M. Kopnarski, K. Postava, and C. Felser, “Ion beam induced modification of exchange interaction and spin-orbit coupling in the Co<sub>2</sub>FeSi Heusler compound,” *J. Phys. D: Appl. Phys.* **40**, 1558–1562 (2007).
19. O. Životský, K. Postava, L. Kraus, M. Foldyna, and J. Pištora, “Magnetic and magneto-optical properties of CoFeCrSiB amorphous ribbons,” *J. Magn. Magn. Mater.* **304**, e534–e536 (2006).
20. M. Foldyna, R. Ossikovski, A. D. Martino, B. Drevillon, K. Postava, D. Ciprian, J. Pištora, and K. Watanabe, “Effective medium approximation of anisotropic lamellar nanogratings based on Fourier factorization,” *Opt. Express* **14**, 3114–3128 (2006).
21. M. Foldyna, K. Postava, R. Ossikovski, A. De Martino, and E. Garcia-Caurel, “Effective spectral optical functions of lamellar nanogratings,” *J. Eur. Opt. Soc.–Rapid Publ.* **1**, 06015–1–06015–9 (2006).
22. O. Životský, K. Postava, M. Foldyna, J. Pištora, and L. Kraus, “Magneto-optic vector magnetometry of CoFeCrSiB amorphous ribbons,” *J. Appl. Phys.* **99**, 08F107–1–08F107–3 (2006).
23. A. Stupakiewicz, R. Gieniusz, A. Maziewski, K. Postava, L. Baczevski, and A. Wawro, “Magnetic anisotropy changes in ultrathin Co films grown on vicinal sapphire substrates,” *physica status solidi (b)* **243**, 202–205 (2006).

24. A. Lesuffleur, M. Vanwolleghem, P. Gogol, B. Bartenlian, P. Beauvillain, J. Harmle, L. Lagae, J. Pistora, K. Postava, S. Visnovsky, and R. Wirix-Speetjens, “Magneto-optical parameters of Co<sub>90</sub>Fe<sub>10</sub> and Co<sub>50</sub>Fe<sub>50</sub> ferromagnetic thin films for 1.3  $\mu$ m integrated isolator,” *J. Magn. Magn. Mater.* **305**, 284–290 (2006).
25. A. Stupakiewicz, R. Gieniusz, K. Postava, M. Tekielak, A. Maziewski, I. Szerel, A. Wawro, and L. Baczewski, “Magnetic ordering in ultra-thin Co films grown on vicinal substrates,” *Materials Science-Poland* **24**, 659–664 (2006).
26. J. Jaworowicz, Z. Kurant, K. Postava, A. Maziewski, L. Baczewski, and A. Wawro, “Domain structures and magnetization processes in thin Co films with in-plane anisotropy,” *Materials Science-Poland* **24**, 639–642 (2006).
27. Š. Višňovský, T. Yamaguchi, J. Pištora, , K. Postava, P. Beauvillain, and M. Veis, “Physics of magneto-optic waveguide isolator,” *Int. J. Microwave Opt. Technol.* **1**, 639–643 (2006).
28. J. Pistora, J. Vlcek, K. Watanabe, K. Postava, S. Visnovsky, R. Antos, and T. Yamaguchi, “Total Reflection Ellipsometry of Lamellar Gratings,” *Int. J. Microwave Opt. Technol.* **1**, 910–913 (2006).
29. K. Postava, M. Vanwolleghem, D. V. Thourhout, R. Baets, Š. Višňovský, P. Beauvillain, and J. Pištora, “Modeling of a novel InP-based monolithically integrated magneto-optical waveguide isolator,” *J. Opt. Soc. Am. B* **22**, 261–273 (2005).
30. M. Foldyna, K. Postava, D. Ciprian, and J. Pištora, “Modeling of magneto-optical properties of periodic nanostructures,” *J. Magn. Magn. Mater.* **290-291**, 120–123 (2005).
31. L. Kraus, M. Malátek, K. Postava, and D. Janičkovič, “Asymmetric giant magnetoimpedance in stress-field annealed CoFeBSi amorphous ribbons,” *J. Magn. Magn. Mater.* **290-291**, 1131–1133 (2005).
32. R. Antos, J. Pistora, I. Ohlidal, K. Postava, J. Mistrik, T. Yamaguchi, S. Visnovsky, and M. Horie, “Specular spectroscopic ellipsometry for the critical dimension monitoring of gratings fabricated on a thick transparent plate,” *J. Appl. Phys.* **97**, 053107 (2005).
33. K. Watanabe, J. Pištora, M. Foldyna, K. Postava, and J. Vlček, “Numerical study on the spectroscopic ellipsometry of lamellar gratings made of lossless dielectric materials,” *J. Opt. Soc. Am. A* **22**, 745–751 (2005).
34. K. Postava, A. Maziewski, T. Yamaguchi, R. Ossikovski, Š. Višňovský, and J. Pištora, “Null ellipsometer with phase modulation,” *Opt. Express* **12**, 6040–6045 (2004).
35. K. Postava, J. Pištora, and T. Yamaguchi, “Magneto-optic vector magnetometry for sensor applications,” *Sens. Actuators A* **110**, 242–246 (2004).
36. K. Postava, O. Životský, J. Pištora, and T. Yamaguchi, “Magneto-optical ellipsometry of systems containing thick layers,” *Thin Solid Films* **455-456**, 615–618 (2004).

37. K. Postava, Š. Višňovský, M. Veis, V. Kolinský, J. Pištora, D. Ciprian, P. Gogol, and P. Beauvillain, “Optimization of a magneto-optical integrated isolator,” *J. Magn. Magn. Mater.* **272-276**, 2319–2320 (2004).
38. J. Pištora, T. Yamaguchi, M. Foldyna, J. Mistrik, K. Postava, and M. Aoyama, “Magnetic sensor with prism coupler,” *Sens. Actuators A* **110**, 87–92 (2004).
39. K. Matsumoto, H. Maeda, Y. Kawaguchi, K. Takahashi, M. Aoyama, T. Yamaguchi, and K. Postava, “Spectroscopic ellipsometry of carbon nanotube formation in SiC surface decomposition,” *Thin Solid Films* **455-456**, 339–343 (2004).
40. J. Grondilová, M. Rickart, M. Veis, E. Lišková, K. Postava, Š. Višňovský, S. O. Demokritov, B. Hillebrands, J. Mistrík, and T. Yamaguchi, “Interface effects on magneto-optic Kerr and reflectivity spectra in ultrathin Fe/Au and Fe/Ag systems,” *Trans. Magn. Soc. Japan* **4**, 293–296 (2004).
41. K. Postava, J. Pištora, M. Kojima, K. Kikuchi, K. Endo, and T. Yamaguchi, “Thickness monitoring of optical filters for DWDM applications,” *Opt. Express* **11**, 610–616 (2003).
42. K. Matsumoto, H. Maeda, K. Postava, K. Takahashi, M. Aoyama, T. Yamaguchi, and J. Pistora, “Spectro-ellipsometric Characterization and Gaseous Occlusion of Fullerene C<sub>60</sub> Crystals,” *Fullerenes, Nanotubes, and Carbon Nanostructures* **11**, 15 – 23 (2003).
43. K. Postava, J. Pištora, Š. Višňovský, D. Hrabovský, and T. Yamaguchi, “Quadratic magneto-optic effects in reflection from uniaxial crystals,” *Trans. Magn. Soc. Japan* **2**, 151–154 (2002).
44. J. Vlcek, J. Pistora, D. Ciprian, T. Yamaguchi, and K. Postava, “Modelling of two-dimensional magnetooptical gratings,” *Trans. Magn. Soc. Japan* **2**, 179–182 (2002).
45. K. Postava, D. Hrabovský, J. Pištora, A. R. Fert, Š. Višňovský, and T. Yamaguchi, “Anisotropy of quadratic magneto-optic effects in reflection,” *J. Appl. Phys.* **91**, 7293–7295 (2002).
46. J. Grondilová, M. Rickart, J. Mistrík, K. Postava, Š. Višňovský, T. Yamaguchi, R. Lopušník, S. O. Demokritov, and B. Hillebrands, “Anisotropy of magneto-optical spectra in ultrathin Fe/Au/Fe bilayers,” *J. Appl. Phys.* **91**, 8246–8248 (2002).
47. K. Postava, T. Yamaguchi, and R. Kantor, “Matrix description of coherent and incoherent light reflection and transmission by anisotropic multilayer structures,” *Appl. Opt.* **41**, 2521–2531 (2002).
48. Š. Višňovský, K. Postava, T. Yamaguchi, and R. Lopušník, “Magneto-optic ellipsometry in exchange coupled films,” *Appl. Opt.* **41**, 3950–3960 (2002).
49. K. Postava, T. Yamaguchi, and M. Horie, “Estimation of the dielectric properties of low-*k* materials using optical spectroscopy,” *Appl. Phys. Lett.* **79**, 2231–2233 (2001).
50. K. Postava, T. Yamaguchi, and T. Nakano, “Characterization of organic low-dielectric-constant materials using optical spectroscopy,” *Opt. Express* **9**, 141–151 (2001).

51. Š. Višňovský, K. Postava, and T. Yamaguchi, “Magneto-optic polar Kerr and Faraday effects in periodic multilayers,” *Opt. Express* **9**, 158–170 (2001).
52. K. Postava and T. Yamaguchi, “Optical functions of low- $k$  materials for interlayer dielectrics,” *J. Appl. Phys.* **89**, 2189–2193 (2001).
53. K. Postava, H. Sueki, M. Aoyama, T. Yamaguchi, K. Murakami, and Y. Igasaki, “Doping effects on optical properties of epitaxial ZnO layers determined by spectroscopic ellipsometry,” *Appl. Surf. Sci.* **175–176**, 543–548 (2001).
54. K. Postava, M. Aoyama, and T. Yamaguchi, “Optical characterization of TiN/SiO<sub>2</sub>(1000 nm)/Si system by spectroscopic ellipsometry and reflectometry,” *Appl. Surf. Sci.* **175–176**, 276–280 (2001).
55. K. Postava, M. Aoyama, T. Yamaguchi, and H. Oda, “Spectroellipsometric characterization of materials for multilayer coatings,” *Appl. Surf. Sci.* **175–176**, 270–275 (2001).
56. J. Pištora, A. Domański, O. Bárta, F. Staněk, K. Postava, D. Ciprian, and I. Kopřiva, “Waveguiding in thin films with quadratic magneto-optical medium,” *Acta Physica Polonica A* **99**, 17–23 (2001).
57. Š. Višňovský, K. Postava, and T. Yamaguchi, “Magneto-optic polar Kerr and Faraday effects in magnetic superlattices,” *Czech J. Phys. B* **51**, 917–949 (2001).
58. K. Postava, H. Sueki, M. Aoyama, T. Yamaguchi, C. Ino, and Y. Igasaki, “Spectroscopic ellipsometry of epitaxial ZnO layer on sapphire substrate,” *J. Appl. Phys.* **87**, 7820–7824 (2000).
59. K. Postava, J. Pištora, and Š. Višňovský, “Magneto-optical effects in ultra-thin structures at transversal magnetization,” *Czech J. Phys. B* **49**, 1185–1204 (1999).
60. J. Pištora, K. Postava, and R. Šebesta, “Optical guided modes in sandwiches with ultrathin metallic films,” *J. Magn. Magn. Mater.* **198–199**, 683–685 (1999).
61. H. Jaffres, L. Ressier, K. Postava, A. Schuhl, F. Nguyen Van Dau, M. Goiran, J. Redoules, J. Peyrade, and A. R. Fert, “Uniaxial magnetic anisotropy of thin epitaxial Fe films nanostructured by the atomic saw method,” *J. Magn. Magn. Mater.* **184**, 19–27 (1998).
62. K. Postava, H. Jaffres, A. Shuhl, F. Nguyen Van Dau, M. Goiran, and A. R. Fert, “Linear and quadratic magneto-optical measurements of the spin re-orientation in epitaxial Fe films on MgO,” *J. Magn. Magn. Mater.* **172**, 199–208 (1997).
63. M. D. Ortega, B. Raquet, K. Postava, R. Mamy, M. Goiran, A. R. Fert, and J. C. Ousset, “Dependence on growth conditions of surface anisotropy and magnetization reversal in Au/Co(0.8nm)/Au/MoS<sub>2</sub>,” *J. Magn. Magn. Mater.* **165**, 487–491 (1997).

64. L. Ressier, A. Schuhl, F. Nguyen Van Dau, K. Postava, M. Goiran, J. P. Peyrade, and A. R. Fert, “Strong uniaxial magnetic anisotropy of nanostripes obtained by cutting thin epitaxial Fe layer using the atomic saw method,” *J. Appl. Phys.* **81**, 5464–5466 (1997).
65. K. Postava, J. F. Bobo, M. D. Ortega, B. Raquet, H. Jaffres, E. Snoeck, M. Goiran, A. R. Fert, J. P. Redoules, J. Pištora, and J. C. Ousset, “Magneto-optical measurements of magnetization reversal in nanometer scale sputtered Fe thin films,” *J. Magn. Magn. Mater.* **163**, 8–20 (1996).
66. J. Pištora, D. Ciprian, R. Kantor, K. Postava, and J. Sobota, “Dark mode spectroscopy of magnetic thin films,” *J. Magn. Magn. Mater.* **157/158**, 283–284 (1996).
67. R. Kantor, K. Postava, and J. Pištora, “Tuning of guided modes in magneto-optical sandwiches,” *J. Magn. Soc. Jpn.* **20**, 125–127 (1996).