Prof. Dr. habil. Mathias Kläui – Publications

Summary: >100 reviewed publications (h-factor 29, >15 with more than 50 citations), 4 patents, >15 reviews, >70 invited presentations at universities, >60 invited conference presentations >70 other contributions, including tutorials, summer school lectures, etc.

a) Regular articles (peer-reviewed):

2000

1. Lopez-Diaz L, Rothman J, Kläui M, et al.
   Computational study of first magnetization curves in small rings
   IEEE TRANSACTIONS ON MAGNETICS 36 (5): 3155 (2000)

2001

2. Rothman J, Kläui M, Lopez-Diaz L, et al.
   Observation of a bi-domain state and nucleation free switching in mesoscopic ring magnets,
   PHYSICAL REVIEW LETTERS 86 (6): 1098 (2001) (295 citations)

3. Kläui M, Rothman J, Lopez-Diaz L, et al.
   Vortex circulation control in mesoscopic ring magnets
   APPLIED PHYSICS LETTERS 78 (21): 3268 (2001) (95 citations)

4. Lopez-Diaz L, Rothman J, Kläui M, et al.
   Vortex formation in magnetic narrow rings: The role of magneto-crystalline anisotropy
   JOURNAL OF APPLIED PHYSICS 89 (11): 7579 (2001)

5. Lopez-Diaz L, Rothman J, Kläui M, et al.
   Computational study of first magnetization curves in small rings
   IEEE TRANSACTIONS ON MAGNETICS 37 (4): 3085 (2001)

6. Xu YB, Hirohata A, Gardiner SM, Kläui M, et al.
   Effects of interdot dipole coupling in mesoscopic epitaxial Fe(100) dot arrays
   IEEE TRANSACTIONS ON MAGNETICS 37 (4): 2055 (2001)

7. Lopez-Diaz L, Kläui M, Rothman J, et al.
   Precessional switching in narrow ring nanomagnets
   PHYSICA B 306 (1-4): 211 (2001)

2002

8. Kläui M, Vaz CAF, Bland JAC, et al.
   Controlled magnetic switching in single narrow rings probed by magnetoresistance measurements
   APPLIED PHYSICS LETTERS 81 (1): 108 (2002) (100 citations)

9. Kläui M, Lopez-Diaz L, Rothman J, et al.
   Switching properties of free-standing epitaxial ring magnets
   JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS 240 (1-3): 7 (2002)

10. Lopez-Diaz L, Kläui M, Rothman J, et al.

Fast and controllable switching in narrow ring nanomagnets (invited)
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS 242: 553 (2002)

11. Kläui M, Lewis PA, Vaz CAF, et al.
Fabrication and magnetic properties of prepatterned epitaxial nanodots
MICROELECTRONIC ENGINEERING 61: 593 (2002)

12. Cui Z, Rothman J, Kläui M, et al.
Fabrication of magnetic rings for high density memory devices
MICROELECTRONIC ENGINEERING 61: 577 (2002)

13. Vaz CAF, Kläui M, Lopez-Diaz L, et al.
Mesoscopic FCC Co ring magnets (invited)
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS 249 (1-2): 208 (2002)

14. Wastlbauer G, Tselepi M, Klaeui M et al.
Magnetic Properties of epitaxial Fe dots grown on pre-patterned GaAs substrates
IEEE Digest of Technical Papers Intermag 2002: 352 (2002)

2003

15. Kläui M, Vaz CAF, Rothman J et al.
Domain wall pinning in narrow ferromagnetic ring structures probed by magnetoresistance measurements
PHYSICAL REVIEW LETTERS 90 (9): 097202 (2003) (86 citations)

16. Kläui M, Vaz CAF, Bland JAC et al.
Domain wall pinning and controlled magnetic switching in narrow ferromagnetic ring structures with notches (invited)
JOURNAL OF APPLIED PHYSICS 93 (10): 7885 (2003)
See also: Virtual Journal of Nanoscale Science & Technology 7 (2003)

17. Yoo YG, Kläui M, Vaz CAF, Bland JAC et al.
Switching field phase diagram of Co nanoring magnets
APPLIED PHYSICS LETTERS 82 (15): 2470 (2003) (76 citations)
See also: Virtual Journal of Nanoscale Science & Technology 7 (2003)

18. Kläui M, Vaz CAF, Bland JAC et al.
Domain wall motion induced by spin polarized currents in ferromagnetic ring structures
APPLIED PHYSICS LETTERS 83 (1): 105 (2003) (100 citations)
See also: Virtual Journal of Nanoscale Science & Technology 8 (2003)

19. Kläui M, Vaz CAF, Bland JAC et al.
Direct observation of spin configurations and classification of switching processes in mesoscopic ferromagnetic rings
PHYSICAL REVIEW B 68 (13) 032504: 134426 (2003)

20. Vaz CAF, Blackburn E, Kläui M et al.
Magnetoresistance magnetometry of $Ni80Fe20_{1-x}Ir_x$ wires with varying anisotropic magnetoresistance ratio
JOURNAL OF APPLIED PHYSICS 93 (10): 8104 (2003)

21. Heyderman LJ, Kläui M, Vaz CAF, Bland JAC et al.
Fabrication and anisotropy investigations of patterned epitaxial magnetic films using a lift-off process
JOURNAL OF APPLIED PHYSICS 93 (10): 7349 (2003)

22. Heyderman LJ, Kläui M, Vaz CAF, Bland JAC et al.
Nanoscale ferromagnetic rings fabricated by electron beam lithography
JOURNAL OF APPLIED PHYSICS 93 (12): 10011 (2003)

23. Vaz CAF, Lopez-Diaz L, Kläui M et al.
Direct observation of remanent magnetic states in epitaxial fcc Co small disks
PHYSICAL REVIEW B Rapid Communication. 67 (14): 140405 (2003)

2004

24. Kläui M, Vaz CAF, Wernsdorfer W et al.
Domain wall behaviour at constrictions in ferromagnetic ring structures
PHYSICA B 343 (1-4): 343 (2004)

25. Kläui M, Vaz CAF, Bland JAC et al.
Switching processes and switching reproducibility in ferromagnetic ring structures
APPLIED PHYSICS LETTERS 84 (6): 951 (2004)

26. Kläui M, Vaz CAF, Monchesky TL et al.
Spin configurations and classification of switching processes in ferromagnetic rings down to sub-100nm dimensions (invited)
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS 272: 1631 (2004)

27. Vaz CAF, Lopez-Diaz L, Kläui M et al.
Observation of a geometrically constrained domain wall in epitaxial FCC Co small disks
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS 272: 1674 (2004)

28. Kläui M, Vaz CAF, Lapicki A et al.
Domain wall pinning in ferromagnetic structures fabricated by focused ion beam
MICROELECTRONIC ENGINEERING 73-74: 785 (2004)

29. Heyderman LJ, Nöhammer B,. David C, Kläui M et al.
Fabrication of nanoscale magnetic ring structures and devices
MICROELECTRONIC ENGINEERING 73-74: 780 (2004)

30. Kläui M, Vaz CAF, Bland JAC et al.
Multi-step switching phase diagram of ferromagnetic ring structures
JOURNAL OF APPLIED PHYSICS 95 (11): 6639 (2004)
See also: Virtual Journal of Nanoscale Science & Technology (2004)

31. Vaz CAF, Kläui M, Bland JAC, et al.
Effect of the magnetocrystalline anisotropy on the magnetic behavior of ring elements
JOURNAL OF APPLIED PHYSICS 95 (11): 6732 (2004)

32. Kläui M, Vaz CAF, Bland JAC et al.
Head-to-head domain wall phase diagram in mesoscopic ring magnets
APPLIED PHYSICS LETTERS 85 (23): 5637 (2004)
See also: Virtual Journal of Nanoscale Science & Technology 10, issue 25 (2004)

2005

33. Kläui M, Vaz CAF, Bland JAC, et al.
Domain wall coupling and collective switching in interacting mesoscopic ring magnet arrays
APPLIED PHYSICS LETTERS 86 (3): 032504 (2005)
See also: Virtual Journal of Nanoscale Science and Technology 11, Issue 3 (2005)

34. Kläui M, Vaz CAF, Bland JAC, et al.
Controlled and reproducible domain wall displacement by current pulses injected into ferromagnetic ring structures
PHYSICAL REVIEW LETTERS 94 (10): 106601 (2005) (150 citations)

35. Heyderman L, Kläui M, Schaublin R, et al.
Fabrication of magnetic ring structures for Lorentz electron microscopy
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS 290: 86 (2005)

36. Kläui M, Vaz CAF, Heyderman LJ, et al.
Spin switching phase diagram of mesoscopic ring magnets
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS 290: 61 (2005)

37. Kläui M, Jubert PO, Allenspach R, et al.
Direct observation of domain-wall configurations transformed by spin currents
PHYSICAL REVIEW LETTERS 95 (2): 026601 (2005) (150 citations)
See also: Virtual Journal of Nanoscale Science and Technology 11, Issue 16 (2005)

38. Kläui M, Ehrke H, Rüdiger U, et al.
Direct observation of domain-wall pinning at nanoscale constrictions
APPLIED PHYSICS LETTERS 87 (10): 102509 (2005)
See also: Virtual Journal of Nanoscale Science and Technology 12, Issue 6 (2005)

39. Vaz CAF, Kläui M, Heyderman LJ, et al.
Multiplicity of magnetic domain-states in circular elements probed by photoemission electron microscopy
PHYSICAL REVIEW B 72: 22 (2005)

40. Jubert PO, Kläui M, Bischof A, et al.
Current induced modifications of domain wall
INTERMAG ASIA 2005: Digests of the IEEE International Magnetics Conference, pp. 69

41. Kläui M, Jubert PO, Allenspach R et al.
Critical parameters for current-induced domain wall motion
INTERMAG ASIA 2005: Digests of the IEEE International Magnetics Conference 69

42. Laufenberg M, Backes D, Kläui M et al.,
Geometry-dependent head-to-head domain wall phase diagram and domain wall widths in ferromagnetic ring structures
INTERMAG ASIA 2005: Digests of the IEEE International Magnetics Conference 69

2006

43. Neudecker I, Kläui M, Perzlmaier K, et al.
Spatially resolved dynamic eigenmode spectrum of Co rings
PHYSICAL REVIEW LETTERS 96: 57207 (2006)
See also: Virtual Journal of Nanoscale Science and Technology (2006)

44. Backes D, Heyderman LJ, Kläui M, et al.
Fabrication of Curved-Line Ferromagnetic Nanostructures on Membranes for Transmission Electron Microscopy Investigations of Magnetic Domain Walls
MICROELECTRONIC ENGINEERING 83: 1726 (2006)

45. Thirion C, Wernsdorfer W, Kläui M, et al.
Anisotropy engineering in Co nanodiscs
NANOTECHNOLOGY 17: 1960 (2006)

46. Vaz CAF, Kläui M, Bland JAC, et al.
Fundamental magnetic states of disk and ring elements
NUCLEAR INSTRUMENTS AND METHODS B 246: 13 (2006)

47. Kläui M, Rüdiger U, Vaz CAF, et al.
Magnetic states in wide annular structures
JOURNAL OF APPLIED PHYSICS 99: 08G308 (2006)

48. Jubert PO, Kläui M, Bischof A, et al.
Velocity of vortex walls moved by current
JOURNAL OF APPLIED PHYSICS 99: 08G523 (2006)

49. Laufenberg M, Backes D, Kläui M, et al.
Observation of thermally activated domain wall transformations
APPLIED PHYSICS LETTERS 88: 52507 (2006)

50. Laufenberg M, Bedau D, Kläui M, et al.
Quantitative determination of domain wall coupling energetics
APPLIED PHYSICS LETTERS 88: 212510 (2006)
See also: Virtual Journal of Nanoscale Science and Technology (2006)

51. Kläui M, Laufenberg M, Heyne L, et al.
Current-induced vortex nucleation and annihilation in vortex domain walls
APPLIED PHYSICS LETTERS 88: 232507 (2006)

52. Laufenberg M, Büher W, Kläui M, et al.
Temperature dependence of the spin torque effect in current-induced domain wall propagation
PHYSICAL REVIEW LETTERS 97: 46602 (2006)

53. Heyderman L, Nolting F, Kläui M, et al.
Magnetization reversal in cobalt antidot arrays
PHYSICAL REVIEW B 73: 214429 (2006)

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54. Dagras P, Kläui M, Laufenberg M, et al.
The influence of thermal excitations and the intrinsic temperature dependence of the spin torque effect in current-induced domain wall motion (invited)
JOURNAL OF PHYSICS D: APPLIED PHYSICS 40: 1247 (2007)

55. Junginger, F, Kläui, M, Rüdiger, U, et al.
Spin torque and heating effects in current-induced domain wall motion probed by transmission electron microscopy
APPLIED PHYSICS LETTERS 90: 132506 (2007)
See also: Virtual Journal of Nanoscale Science and Technology (2007)

56. König C, Güntherodt G, Kläui M, et al.
Micromagnetism and Magnetotransport of Micron-Sized Epitaxial CrO_2(100) Wires
PHYSICAL REVIEW B 75: 144428 (2007)

57. Bedau D, Kläui M, Rüdiger U, et al.
Angular dependence of the depinning field for head-to-head domain walls at constrictions
JOURNAL OF APPLIED PHYSICS 101: 09F509 (2007)
See also: Virtual Journal of Nanoscale Science and Technology (2007)

58. Steinmüller SJ, Vaz CAF, Kläui M, et al.
Influence of substrate roughness on the magnetic properties of thin fcc Co films
JOURNAL OF APPLIED PHYSICS 101: 09D113 (2007)

59. Biehler A, Kläui M, Fonin M, et al.
Domain structures and the influence of current on domains and domain walls in highly spin-polarized CrO_2 wire elements
PHYSICAL REVIEW B 75: 184427 (2007)

60. Vaz CAF, Hayward TJ, Kläui M, et al.
Ferromagnetic Nanorings
JOURNAL OF PHYSICS: CONDENSED MATTER 19: 255207 (2007) (selected as one of Top 10 papers 2007 in the journal)

61. Schieback C, Kläui M, Nowak U, et al.
Numerical investigation of spin-torque using the Heisenberg model
EUROPEAN JOURNAL OF PHYSICS B 59: 429 (2007)

62. Steinmüller S, Vaz CAF, Kläui M, et al.
Influence of undulating substrate roughness on thin ferromagnetic films
PHYSICAL REVIEW B 76: 54429 (2007)

63. Backes D, Schieback C, Kläui M, et al.
Transverse Domain Walls in Nanoconstrictions
APPLIED PHYSICS LETTERS 91: 112502 (2007)

64. Bedau D, Kläui M, Krzyk S, et al.
Detection of current-induced resonance of geometrically confined domain walls
PHYSICAL REVIEW LETTERS 99: 146601 (2007)
See also: Virtual Journal of Nanoscale Science and Technology (2007)

65. Hempe E, Kläui M, Kasama T, et al.
Domain walls, domain wall transformations and structural changes in Permalloy nanowires when subjected to current pulses
PHYSICA STATUS SOLIDI A 204: 3922 (2007)

2008

66. Heyne L, Backes D, Kläui M, Nolting, F et al.
Relation between Non-Adiabaticity and Damping in Permalloy Studied by Current Induced Spin Structure Transformations
PHYSICAL REVIEW LETTERS 100: 66603 (2008)
See also: Virtual Journal of Nanoscale Science and Technology (2008)

67. Mengotti E, Heyderman LJ, Kläui M, et al.
Easy axis magnetization reversal in cobalt antidot arrays
JOURNAL OF APPLIED PHYSICS 103: 07D509 (2008)

68. Heyne L, Kläui M, Nolting F, et al.
Direct imaging of current-induced domain wall motion in CoFeB structures
JOURNAL OF APPLIED PHYSICS 103: 07D928 (2008)

69. Junginger F, Kläui M, Backes D, et al.
Quantitative determination of vortex core dimensions in head-to-head domain walls using off-axis electron holography
APPLIED PHYSICS LETTERS 92: 112502 (2008)

70. Eltschka M Kläui M, Kasama T, et al.
Correlation between spin structure and the three-dimensional geometry in chemically synthesized magnetite rings
APPLIED PHYSICS LETTERS 92: 222508 (2008)

71. Möhrke P, Moore T, Kläui M, et al.
Single shot Kerr magnetometer for observing domain wall motion in Permalloy nanowires in real time
JOURNAL OF PHYSICS D: APPLIED PHYSICS 41: 164009 (2008)

72. Kläui M,
Flipping a domain wall switch
PHYSICAL REVIEW LETTERS VIEWPOINT doi:10.1103/Physics.1.17, (2008)

73. Ilgaz D, Kläui M, Heyne L, et al.
Selective domain wall depinning in a non-local spin valve
APPLIED PHYSICS LETTERS 93: 132503 (2008)

74. Walowski J, Kläui M, Münzenberg M, et al.
Energy equilibration processes of electrons, magnons and phonons on the femtosecond timescale
PHYSICAL REVIEW LETTERS 101: 237401 (2008)
See also: Virtual Journal of Nanoscale Science and Technology (2008)

75. Boulle O, Kimling J, Kläui M, et al.
Non-adiabatic spin transfer torque in high anisotropy magnetic nanowires
PHYSICAL REVIEW LETTERS 101: 216601 (2008)
See also: Virtual Journal of Nanoscale Science and Technology (2008)

76. Yan C-H, Jia C-J, Kläui M, et al.
Large Scale Synthesis of Single Crystalline Iron Oxide Magnetic Nanorings
JOURNAL OF THE AMERICAN CHEMICAL SOCIETY 130: 16968 (2008)

77. Bedau D, Kläui M, Hua M.-T. et al.
Quantitative Determination of the Non-linear Pinning Potential for a Magnetic Domain Wall
PHYSICAL REVIEW LETTERS 101: 256602 (2008)
See also: Virtual Journal of Nanoscale Science and Technology (2008)

2009

78. Boulle O, Heyne L, Kläui M, et al.
Reversible switching between bi-domain states by injection of current pulses in a magnetic wire with out-of-plane magnetization
JOURNAL OF APPLIED PHYSICS 105: 07C106 (2009)

79. Moore T, Kläui M, Möhrke P, et al.
Non-adiabaticity of spin-polarized transport in doped permalloy nanostructures
PHYSICAL REVIEW B 80: 132403 (2009)

80. Bisig, A, Boulle O, Kläui M et al.
Tunable steady-state domain wall oscillator with perpendicular magnetic anisotropy
APPLIED PHYSICS LETTERS 95: 162504 (2009)

81. Heyne L, Kläui M, H. Kohno, et al.
Geometry-dependent scaling of critical current densities for current-induced domain wall motion and transformations
PHYSICAL REVIEW B 80: 184405 (2009)

82. Franken J, Möhrke P, Kläui M, et al.
Effects of combined current injection and laser irradiation on permalloy nanowire switching probed by real-time Kerr-microscopy
APPLIED PHYSICS LETTERS 95: 212502 (2009)

83. Schieback C, Kläui M, Nowak U et al.
Current-induced domain wall motion including thermal effects based on the Landau-Lifshitz-Bloch equation
PHYSICAL REVIEW B 80: 214403 (2009)

84. Wilhelm E-S, Kläui M, Rhensius J, et al.
Domain wall transformations into end domains
APPLIED PHYSICS LETTERS 95: 252501 (2009)

85. Boulle O, Kim J-S, Kläui, M et al.
Detection of vortex core polarities by a homodyne detection scheme
IEEE ELECTROMAGNETICS IN ADVANCED APPLICATIONS 09: 898 (2009)

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86. Malinowski G, Lörincz A, Kläui M, et al.
Current induced domain wall motion in Ni80Fe20 nanowires with low pinning fields
JOURNAL OF PHYSICS D: APPLIED PHYSICS 43: 45003 (2009)

87. Moore T, Möhrke P, Kläui M, et al.
Domain wall velocity measurement in Permalloy nanowires with XMCD imaging and single shot Kerr microscopy
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS 322: 1347 (2010)

88. Rhensius J, Kläui M, Heyne L.
Imaging of DomainWall Inertia in Permalloy Half-Ring Nanowires by Time-Resolved Photoemission Electron Microscopy
PHYSICAL REVIEW LETTERS 104: 67201 (2010)

89. Krzyk S, Kläui M, Schmidsfeld A, et al.
Magnetotransport effects in ultrathin $Ni_{80}Fe_{20}$ films probed in situ
NEW JOURNAL OF PHYSICS 12: 13001 (2010)

90. Heyne L, Rhensius J, Kläui M et al.
Direct observation of high velocity current induced domain wall motion
APPLIED PHYSICS LETTERS 96: 32504 (2010)

91. Römer FM, Heyne L, Kläui M et al.
Spatially resolved measurements of the ferromagnetic phase transition by ac-susceptibility investigations with x-ray photoelectron emission microscope
APPLIED PHYSICS LETTERS 96: 122501 (2010)

92. Bisig A, Rhensius J, Kläui M et al.
Direct imaging of current induced vortex gyration in an asymmetric potential well
APPLIED PHYSICS LETTERS 96: 152506 (2010)

93. Möhrke P, Rhensius J, Kläui M et al.
Tailoring laser-induced domain wall pinning
SOLID STATE COMMUNICATIONS 150: 489 (2010)

94. Heinen J, Boulle O, Kläui M et al.
Current-induced domain wall motion in Co/Pt nanowires: Separating spin torque and Oersted-field effects
APPLIED PHYSICS LETTERS 96: 202510 (2010)

95. Eltschka M, Wötzel M, Kläui M et al.
Non-adiabatic spin torque investigated using thermally activated magnetic domain wall dynamics
PHYSICAL REVIEW LETTERS 105: 056601 (2010)
See also: Virtual Journal of Nanoscale Science and Technology (20010)

96. Ilgaz D, Nievendick J, Kläui M et al.
Domain wall depinning assisted by pure spin currents
PHYSICAL REVIEW LETTERS 105: 076601 (2010)

97. Kim J-S, Boulle O, Kläui M et al.
Current-induced vortex dynamics and pinning potentials probed by homodyne detection
PHYSICAL REVIEW B 82: 104427 (2010)

98. Moore T, Möhrke P, Kläui M et al.,
Magnetic-field-induced domain-wall motion in permalloy nanowires with modified Gilbert damping
PHYSICAL REVIEW B 82: 094445 (2010)

99. Moutafis C, Rhensius J, Kläui M et al.
Skyrmions in perpendicular magnetic anisotropy dots: Imaging and simulations
IEEE ELECTROMAGNETICS IN ADVANCED APPLICATIONS 10: 1121 (2010)

100. Heyne L, Rhensius J, Kläui M et al.
Direct Determination of Large Spin-Torque Nonadiabaticity in Vortex Core Dynamics
PHYSICAL REVIEW LETTERS 105: 187203 (2010)

101. Patra A, Bieren A, Kläui M et al.
Magnetoresistance measurement of tailored Permalloy nanocontacts
PHYSICAL REVIEW B 82: 134447 (2010)

b) Review Articles, Book chapters:

- Kläui M, Vaz CAF, Lopez-Diaz L, Bland JAC
Vortex Formation in narrow ferromagnetic rings (invited, 110 citations)
Topical Review in JOURNAL OF PHYSICS (CONDENSED MATTER) 15: 985 (2003)

- Kläui M
Spin switching in mesoscopic ring magnets (invited)
Review in ADVANCES IN SOLID STATE PHYSICS 44: 479 (2004)

- Henseler P, Schieback C, Kläui M, et al.
  Book chapter: Nano-Systems in External Fields and Reduced Geometry: Numerical Investigations
  In HIGH PERFORMANCE COMPUTING IN SCIENCE AND ENGINEERING
  Edited by W. E. Nagel, W. Jäger, M. Resch (Springer, 2006)

- Kläui M
  Book chapter: Geometrically confined domain walls
  In MAGNETIC NANOSTRUCTURES IN MODERN TECHNOLOGY: pp85-104
  Edited by B. Azzerboni and G. Asti (Springer 2007)

- Kläui M, Vaz CAF
  Book chapter: Magnetization configurations and reversal in small magnetic elements
  In THE HANDBOOK OF MAGNETISM AND ADVANCED MAGNETIC MATERIALS - VOLUME 2: pp879-915
  Edited by H. Kronmüller and S. S. P. Parkin (Wiley & Sons 2007)

- Laufenberg M, Kläui M, Backes D, et al.
  Domain Wall Spin Structures in 3d Metal Ferromagnetic Nanostructures (invited)
  Review in ADVANCES IN SOLID STATE PHYSICS 46: 271 (2008)

- Kläui M
  Magnetic Domain Walls - Exciting Physics and Novel Applications
  Article in JAHRBUCH DER AKADEMIE DER WISSENSCHAFTEN ZU GÖTTINGEN 2006
  Edited by W. Lehfeldt (Vandenhoeck & Ruprecht, 2007)

- Kläui M
  Head-to-head domain walls in magnetic nanostructures (invited)
  Topical Review in JOURNAL OF PHYSICS (CONDENSED MATTER) 20: 313001 (2008)

- Kläui M, Ilgaz D, Heyne L et al.,
  Concepts for Domain Wall Motion in Nanoscale Ferromagnetic Elements due to Spin Torque and in particular Oersted Fields
  Review in JOURNAL OF MAGNETICS 14: 53 (2009)

- Kläui M
  Racetrack-Speicher – Magnetband reloaded?
  Article in PHYSIK IN UNSERER ZEIT 3/2009, 138 (2009)

- Möhrke P, Kläui M
  Strom aus wandernden Wänden
  Article in PHYSIK JOURNAL 04/2009

- Kläui M
  Renaissance des magnetischen Bandes
  Article in SWISS ENGINEERING STZ 4/2010, 20 (2010)

- Kläui M
  DomainWall Spin Structures and Dynamics probed by Synchrotron Techniques
  Book chapter in MAGNETISM AND SYNCHROTRON RADIATION: NEW TRENDS 133: 367 (Springer,

2010)

- Heyne L, Kläui M, Rhensius J, et al.,
  In-Situ Contacting and Current-Injection into Samples in Photoemission Electron Microscopes
  REVIEW OF SCIENTIFIC INSTRUMENTS 81: 113707 (2010)

- Boulle O, Malinowski G, Kläui M,
  Current-induced domain wall motion in nanoscale ferromagnetic elements
  MATERIALS SCIENCE AND ENGINEERING REPORTS 72: 159 (2011) (Inside Cover Page)

c) Other publications:

General non-physics:

- Differences foster innovation
  in „Progress 2009 – Zukunftskolleg der Universität Konstanz“
- Das CERN bei Genf: Eine Kathedrale der Physik
  in „Mekkas der Moderne – Pilgerstätten der Wissensgesellschaft“, Böhlau 2010.
- Sustainable Technology Leadership – mit Technologie und Energie in die Zukunft in
  Policy Brief and Policy Paper – Stiftung Neue Verantwortung 2010
- Sustainable Technology Leadership – mit Technologie und Energie in die Zukunft Policy Paper
- „Forschen in drei Monaten – oder was von der Diplomarbeit übrig blieb“, in „Beiträge zur Bologna Reform“, Junge Akademie, Berlin 2010

Patents:

- The Onion State in Magnetic Data Storage,
  Bland JAC, Kläui M, Lopez-Diaz L and Rothman J, Patent registered (UK, Europe and USA),
  Reference number EP1307891

- Switchable Element,
  Kläui M, Allenspach R, Jubert PO, Patent registered (CH, Europe and USA),
  Reference number US2006/0221677, EP05405017

- Information storage device comprises magnetic layer for storing information, conductive layer contacting end of magnetic layer, and another conductive layer contacting another end of magnetic layer
  Bae J, Kim K, Kläui M et al., Patent registered (USA and Korea)
  Reference number US2009180218-A1; KR2009078129-A; US7885104-B2

- Oscillator e.g. for wireless communication system, has fixed layer formed on separation layer to correspond to magnetic domain wall to generate signal by precession of magnetic moment of magnetic domain wall
  Lee S, Kläui M, Seo S et al., Patent registered (USA, Japan and Korea),
  Reference number US2011018647; JP2011029616; KR2011009979