

## Peer Reviewed Publications, Univ.-Prof. Dr. Andrii V. Chumak

Scopus ID: <https://www.scopus.com/authid/detail.uri?authorId=8219595500>  
Researcher ID: <http://www.researcherid.com/rid/N-1395-2013>  
Google Scholar: <https://scholar.google.de/citations?user=h8XwXewAAAAJ&hl=en>  
ORCID: [0000-0001-5515-0848](https://orcid.org/0000-0001-5515-0848)

Book chapters: 3  
Invited reviews: 12  
Peer reviewed articles: 119 (+8 submitted)  
Number of patents: 1  
Contributions (presenting): 137 (69 invited talks and lectures, 28 invited seminars)  
Scopus: h-index = 50, 1668 citations in 2024, 12.014 in total

### Book Chapters

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1. *Magnon spintronics: Fundamentals of magnon-based computing*  
A. V. Chumak  
In: [Spintronics Handbook: Spin Transport and Magnetism](#), Second Edition,  
E. Y. Tsymlal and I. Žutić (eds.), CRC Press, Boca Raton, Florida), Chapter 6, pp. 247-302, (2019)  
ISBN 9781498769723 - CAT# K29316
2. *Magnon spintronics*  
A.D. Karenowska, A.V. Chumak, A.A. Serga, and B. Hillebrands in [Handbook of Spintronics](#),  
Y. Xu, D.D. Awschalom, J. Nitta (eds.), Springer, pp. 1505-1549 (2015)  
ISBN 978-94-007-6891-8
3. *The dynamic magnonic crystal: New horizons in artificial crystal based signal processing*  
A.V. Chumak, A.D. Karenowska, A.A. Serga, and B. Hillebrands  
In: Topics in Applied Physics, Vol.125: [Magnonics From Fundamentals to Applications](#),  
S.O. Demokritov and A.N. Slavin (eds.), Springer, pp. 243-255 (2012)  
ISBN 978-3-642-30247-3

### List of Submitted Articles

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- *Elimination of substrate-induced FMR linewidth broadening in the epitaxial system YIG-GGG by microstructuring*  
D. Schmoll, R. O. Serha, J. Panda, A. A. Voronov, C. Dubs, M. Urbánek, A. V. Chumak  
[arXiv:2502.02978](#)
- *Micromagnetic Simulation and Optimization of Spin-Wave Transducers*  
F. Bruckner, K. Davidková, C. Abert, A.V. Chumak, D. Suess  
[arXiv:2501.16553](#)

- *Realization of inverse-design magnonic logic gates*  
N. Zenbaa, F. Majcen, C. Abert, F. Bruckner, N. J. Mauser, T. Schrefl, Q. Wang, D. Suess, and A. V. Chumak  
[arXiv:2411.17546](#)
- *YIG/CoFeB bilayer magnonic diode*  
N. Zenbaa, K. O. Levchenko, J. Panda, K. Davidková, M. Ruhwedel, S. Knauer, M. Lindner, C. Dubs, Q. Wang, M. Urbánek, P. Pirro, A. V. Chumak  
[arXiv:2412.08383](#)
- *Inverse-design topology optimization of magnonic devices using level-set method*  
A. A. Voronov, M. C. Santos, F. Bruckner, D. Suess, A. V. Chumak, C. Abert  
[arXiv:2411.19109](#)
- *Review on spin-wave RF applications*  
K. Davidková, K. Levchenko, J. Mikkelsen, A. Chumak  
[arXiv:2411.19212](#)
- *Wavenumber-dependent magnetic losses in YIG-GGG heterostructures at millikelvin temperatures*  
D. Schmoll, A. A. Voronov, R. O. Serha, D. Slobodianiuk, K. O. Levchenko, C. Abert, S. Knauer, D. Suess, R. Verba, A. V. Chumak  
[arXiv:2411.13414](#)
- *NeuralMag: an open-source nodal finite-difference code for inverse micromagnetics*  
C. Abert, F. Bruckner, A. Voronov, M. Lang, S. Pathak, S. Holt, R. Kraft, R. Allayarov, P. Flauger, S. Koraltan, T. Schrefl, A. Chumak, H. Fangohr, D. Suess  
[arXiv:2411.11725](#)

## List of Accepted Peer-Reviewed Articles

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- *Nanoscaled Spin-Wave Frequency Selective Limiter (FSL) for 5G Technology*  
K. Levchenko, K. Davidková, F. Bruckner, R. Verba, F. Majcen, Q. Wang, C. Dubs, V. Vlaminck, J. Klíma, M. Urbánek, D. Suess, A. Chumak  
[10.5281/zenodo.14644054](#), accepted in Phys. Rev. Appl. (2025)

## List of Published Peer Reviewed Articles

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1. *Damping Enhancement in YIG at Millikelvin Temperatures due to GGG Substrate*  
R. O. Serha, A. A. Voronov, D. Schmoll, R. Klingbeil, S. Knauer, S. Koraltan, E. Pribytova, M. Lindner, T. Reimann, C. Dubs, C. Abert, R. Verba, M. Urbánek, D. Suess, A. V. Chumak  
[Mater. Today Quant. 5, 100025 \(2025\)](#) DOI: 10.1016/j.mtquan.2025.100025
2. *A universal inverse-design magnonic device*  
N. Zenbaa, C. Abert, F. Majcen, M. Kerber, R. O. Serha, S. Knauer, Q. Wang, T. Schrefl, D. Suess, A. V. Chumak  
[Nat. Electron \(2025\)](#) DOI: 10.1038/s41928-024-01333-7

3. *Fast switchable unidirectional forward volume spin-wave emitter*  
Y. Wang, M. Guo, K. Davidková, R. Verba, X. Guo, C. Dubs, A. V. Chumak, P. Pirro, Q. Wang  
[Phys. Rev. Applied \*\*23\*\*, 014066 \(2025\)](#) DOI: 10.1103/PhysRevApplied.23.014066
4. *Plasmon-enhanced Brillouin light scattering spectroscopy for magnetic systems. II. Numerical simulations*  
Y. Demydenko, T. Vasiliev, K. O. Levchenko, A. V. Chumak, V. Lozovski  
[Phys. Rev. B \*\*111\*\*, 014405 \(2025\)](#) DOI: 10.1103/PhysRevB.111.014405
5. *Plasmon-enhanced Brillouin light scattering spectroscopy for magnetic systems: Theoretical model*  
V. Lozovski and A.V. Chumak  
[Phys. Rev. B \*\*110\*\*, 184419 \(2024\)](#) DOI: 10.1063/5.0218478
6. *Unidirectional propagation of zero-momentum magnons*  
O. Wojewoda, J. Holobrádek, D. Pavelka, E. Pribytova, J. Krčma, J. Klíma, J. Michalička, T. Lednický, A. V. Chumak, M. Urbánek  
[Appl. Phys. Lett. \*\*125\*\*, 132401 \(2024\)](#) DOI: 10.1063/5.0218478
7. *All-magnonic repeater based on bistability*  
Q. Wang, R. Verba, K. Davidkova, B. Heinz, S. Tian, Y. Rao, M. Guo, X. Guo, C. Dubs, P. Pirro, A.V. Chumak  
[Nat. Comm. \*\*15\*\*, 7577 \(2024\)](#) DOI: 10.1038/s41467-024-52084-0
8. *Magnetic anisotropy and GGG substrate stray field in YIG films down to millikelvin temperatures*  
R. O. Serha, A. A. Voronov, D. Schmoll, R. Verba, K. O. Levchenko, S. Koraltan, K. Davidková, B. Budinska, Q. Wang, O. V. Dobrovolskiy, M. Urbánek, M. Lindner, T. Reimann, C. Dubs, C. Gonzalez-Ballester, C. Abert, D. Suess, D. A. Bozhko, S. Knauer, A. V. Chumak  
[npj Spintronics \*\*2\*\*, 29 \(2024\)](#) DOI: 10.1038/s44306-024-00030-7
9. *Nanoscaled Magnonic Networks*  
Q. Wang, G. Csaba, R. Verba, A. V. Chumak, P. Pirro  
[Phys. Rev. Applied \*\*21\*\*, 040503 \(2024\)](#) DOI: 10.1103/PhysRevApplied.21.040503
10. *Roadmap for Unconventional Computing with Nanotechnology*  
G. Finocchio, S. Bandyopadhyay, P. Lin, G. Pan, J. J. Yang, R. Tomasello, C. Panagopoulos, M. Carpentieri, V. Puliafito, J. Åkerman, H. Takesue, A. Ranjan Trivedi, S. Mukhopadhyay, K. Roy, V. K. Sangwan, M. C. Hersam, A. Giordano, H. Yang, J. Grollier, K. Camsari, P. McMahon, S. Datta, J. A. Incorvia, J. Friedman, S. Cotozana, F. Ciubotaru, A. V. Chumak, A. J. Naeemi, B. Kumar Kaushik, Y. Zhu, K. Wang, B. Koiller, G. Aguilar, G. Temporão, K. Makasheva, A. Todri-Sanial, J. Hasler, W. Levy, V. Roychowdhury, S. Ganguly, A. Ghosh, D. Rodriguez, S. Sunada, K. Evershor-Sitte, A. Lal, S. Jadhav, M. Di Ventra, Y. Pershin, K. Tatsumura, H. Goto  
[Nano Futures \*\*8\*\*, 1 \(2024\)](#) DOI: 10.1088/2399-1984/ad299a
11. *Nanoscaled magnon transistor based on stimulated three-magnon splitting*  
X. Ge, R. Verba, P. Pirro, A. V. Chumak, Q. Wang  
[Appl. Phys. Lett. \*\*124\*\*, 122413 \(2024\)](#) DOI: 10.1063/5.0189619
12. *Offset-free magnetic field sensor based on a standing spin wave*  
M. Gattringer, C. Abert, Q. Wang, A. Chumak, and D. Suess  
[Phys. Rev. Appl. \*\*20\*\*, 044083 \(2023\)](#) DOI: 10.1103/PhysRevApplied.20.044083

13. *Stimulated amplification of propagating spin waves*  
D. Breitbach, M. Schneider, F. Kohl, L. Scheuer, B. Heinz, R. O. Serha, J. Maskill, T. Brächer, B. Lägél, C. Dubs, V. S. Tiberkevich, A. N. Slavin, A. A. Serga, B. Hillebrands, A. V. Chumak, P. Pirro  
[Phys. Rev. Lett. \*\*131\*\*, 156701 \(2023\)](#) DOI: 10.1103/PhysRevLett.131.156701
14. *Deeply nonlinear excitation of self-normalized short spin waves*  
Q. Wang, R. Verba, B. Heinz, M. Schneider, O. Wojewoda, K. Davidková, K. Levchenko, C. Dubs, N. J. Mauser, M. Urbánek, P. Pirro, A. V. Chumak  
[Sci. Adv. \*\*9\*\*, eadg4609 \(2023\)](#) DOI: 10.1126/sciadv.adg4609
15. *Generation of Spin-Wave Pulses by Inverse Design*  
S. Casulleras, S. Knauer, Q. Wang, O. Romero-Isart, A. V. Chumak, C. Gonzalez-Ballester  
[Phys. Rev. Applied \*\*19\*\*, 064085 \(2023\)](#) DOI: 10.1103/PhysRevApplied.19.064085
16. *Vortex counting and velocimetry at slitted superconducting thin strips*  
V. M. Bevez, M. Yu. Mikhailov, B. Budinska, S. Lamb-Camarena, S. O. Shpilinska, A. V. Chumak, M. Urbanek, M. Arndt, W. Lang, O. V. Dobrovolskiy  
[Phys. Rev. Applied \*\*19\*\*, 034098 \(2023\)](#) DOI: 10.1103/PhysRevApplied.19.034098
17. *Propagating spin-wave spectroscopy in nanometer-thick YIG films at millikelvin temperatures*  
S. Knauer, K. Davidková, D. Schmoll, R. O. Serha, A. Voronov, Q. Wang, R. Verba, O.V. Dobrovolskiy, M. Lindner, T. Reimann, C. Dubs, M. Urbánek, A. V. Chumak  
[J. of Appl. Phys. \*\*133\*\*, 143905 \(2023\)](#) DOI: 10.1063/5.0137437
18. *Numerical model for 32-bit magnonic ripple carry adder*  
U. Garlando, Q. Wang, O. V. Dobrovolskiy, A. V. Chumak, F. Riente  
[IEEE Trans. Emerging Topics in Computing, \*\*1\*\* \(2023\)](#) DOI: 10.1109/TETC.2023.3238581
19. *A micromagnetic-integrated numerical model of spin pumping, based on spin diffusion*  
M. Gattringer, C. Abert, F. Bruckner, A. Chumak, D. Suess  
[Phys. Rev. B \*\*106\*\*, 024417 \(2022\)](#) DOI: 10.1103/PhysRevB.106.024417
20. *Advances in Magnetism Roadmap on Spin-Wave Computing*  
A. V. Chumak, P. Kabos, M. Wu, C. Albert, C. Adelman, A. Adeyeye, J. Åkerman, F. G. Aliev, A. Anane, A. Awad, C. H. Back, A. Barman, G. E. W. Bauer, M. Becherer, E. N. Beginin, V. A. S. V. Bittencourt, Y. M. Blanter, P. Bortolotti, I. Boventer, D. A. Bozhko, S. A. Bunyaev, J. J. Carmiggelt, R. R. Cheenikundil, F. Ciubotaru, S. Cotofana, G. Csaba, O. V. Dobrovolskiy, C. Dubs, M. Elyasi, K. G. Fripp, H. Fulara, I. A. Golovchanskiy, C. Gonzalez-Ballester, P. Graczyk, D. Grundler, P. Gruszecki, G. Gubbiotti, K. Guslienko, A. Haldar, S. Hamdioui, R. Hertel, B. Hillebrands, T. Hioki, A. Houshang, C.-M. Hu, H. Huebl, M. Huth, E. Iacocca, M. B. Jungfleisch, G. N. Kakazei, A. Khitun, R. Khymyn, T. Kikkawa, M. Kläui, O. Klein, J. W. Kłos, S. Knauer, S. Koraltan, M. Kostylev, M. Krawczyk, I. N. Krivorotov, V. V. Kruglyak, D. Lachance-Quirion, S. Ladak, R. Lebrun, Y. Li, M. Lindner, R. Macêdo, S. Mayr, G. A. Melkov, S. Mieszczak, Y. Nakamura, H. T. Nembach, A. A. Nikitin, S. A. Nikitov, V. Novosad, J. A. Otalora, Y. Otani, A. Papp, B. Pigeau, P. Pirro, W. Porod, F. Porrati, H. Qin, B. Rana, T. Reimann, F. Riente, O. Romero-Isart, A. Ross, A. V. Sadovnikov, A. R. Safin, E. Saitoh, G. Schmidt, H. Schultheiss, K. Schultheiss, A.A. Serga, S. Sharma, J. M. Shaw, D. Suess, O. Surzhenko, K. Szulc, T. Taniguchi, M. Urbánek, K. Usami, A. B. Ustinov, T. van der Sar, S. van Dijken, V. I. Vasyuchka, R. Verba, S. Viola Kusminskiy, Q. Wang, M. Weides, M. Weiler, S.

- Wintz, S. P. Wolski, X. Zhang H. Qin,  
[IEEE Trans. Magn. 58, 0800172 \(2022\)](#) DOI: 10.1109/TMAG.2022.3149664
21. *Parametric generation of spin waves in nanoscaled magnonic conduits*  
B. Heinz, M. Mohseni, A. Lentfert, R. Verba, M. Schneider, B. Lägel, K. Levchenko,  
T. Brächer, C. Dubs, A. V. Chumak, and P. Pirro  
[Phys. Rev. B 105, 144424 \(2022\)](#) DOI: 10.1103/PhysRevB.105.144424
  22. *Rising speed limits for fluxons via edge quality improvement in wide MoSi thin films*  
B. Budinska, B. Aichner, D. Yu. Vodolazov, M. Yu. Mikhailov, F. Porrati, M. Huth,  
A. V. Chumak, W. Lang, and O. V. Dobrovolskiy  
[Phys. Rev. Applied 17, 034072 \(2022\)](#) DOI: 10.1103/PhysRevApplied.17.034072
  23. *Fast long-wavelength exchange spin waves in partially-compensated Ga:YIG*  
T. Böttcher, M. Ruhwedel, K. O. Levchenko, Q. Wang, H. L. Chumak, M. A. Popov,  
I. V. Zavislyak, C. Dubs, O. Surzhenko, B. Hillebrands, A. V. Chumak, P. Pirro  
[Appl. Phys. Lett. 120, 102401 \(2022\)](#) DOI: 10.1063/5.0082724
  24. *Merging of spin-wave modes in obliquely magnetized circular nanodots*  
J. Kharlan, V. Borynskiy, S. A. Bunyaev, P. Bondarenko, O. Salyuk, V. Golub, A. A. Serga,  
O. V. Dobrovolskiy, A. Chumak, R. Verba, and G. N. Kakazei  
[Phys. Rev. B 105, 014407 \(2022\)](#) DOI: 10.1103/PhysRevB.105.014407
  25. *Nonreciprocal magnon fluxonics upon ferromagnet/superconductor hybrids*  
O. V. Dobrovolskiy and A. V. Chumak  
[J. Magn. Magnet. Mater. 543, 168633 \(2022\)](#) DOI: 10.1016/j.jmmm.2021.168633
  26. *Control of the Bose-Einstein condensation of magnons by the Spin Hall effect*  
M. Schneider, D. Breitbach, R. Serha, Q. Wang, A. A. Serga, A. N. Slavin, V. S. Tiberkevich,  
B. Heinz, B. Lägel, T. Brächer, C. Dubs, S. Knauer, O. V. Dobrovolskiy, P. Pirro, B. Hillebrands,  
and A. V. Chumak  
[Phys. Rev. Lett. 127, 237203 \(2021\)](#) DOI: 10.1103/PhysRevLett.127.237203
  27. *Spin-wave dispersion measurement by variable-gap propagating spin-wave spectroscopy*  
M. Vaňatka, K. Szulc, O. Wojewoda, C. Dubs, A. V. Chumak, M. Krawczyk,  
O. V. Dobrovolskiy, J. W. Kłos, and M. Urbánek  
[Phys. Rev. Appl. 16, 054033 \(2021\)](#) DOI: 10.1103/PhysRevApplied.16.054033
  28. *Stabilization of a nonlinear bullet coexisting with a Bose-Einstein condensate in a rapidly cooled magnonic system driven by a spin-orbit torque*  
M. Schneider, D. Breitbach, R. O. Serha, Q. Wang, M. Mohseni, A. A. Serga, A. N. Slavin,  
V. S. Tiberkevich, B. Heinz, T. Brächer, B. Lägel, C. Dubs, S. Knauer, O. V. Dobrovolskiy,  
P. Pirro, B. Hillebrands, and A. V. Chumak  
[Phys. Rev. B 104, L140405 \(2021\)](#) DOI: 10.1103/PhysRevB.104.L140405
  29. *Tension-free Dirac strings and steered magnetic charges in 3D artificial spin ice*  
S. Koraltan, F. Slanovc, F. Bruckner, C. Nisoli, A.V. Chumak, O.V. Dobrovolskiy, C. Abert, and  
D. Sues  
[npj Comput Mater 7, 125 \(2021\)](#) DOI: 10.1038/s41524-021-00593-7
  30. *The 2021 Magnonics Roadmap*  
A. Barman, G. Gubbiotti, S. Ladak, A. O. Adeyeye, M. Krawczyk, J. Gräfe, C. Adelman,  
S. Cotofana, A. Naeemi, V. I. Vasyuchka, B. Hillebrands, S. A. Nikitov, H. Yu, D. Grundler,

- A. V. Sadovnikov, A. A. Grachev, S. E. Sheshukova, J.-Y. Duquesne, M. Marangolo, G. Csaba, W. Porod, V. E. Demidov, S. Urazhdin, S. O. Demokritov, E. Albisetti, D. Petti, R. Bertacco, H. Schultheiss, V. V. Kruglyak, V. D. Poimanov, S. Sahoo, J. Sinha, H. Yang, M. Münzenberg, T. Moriyama, S. Mizukami, P. Landeros, R. A. Gallardo, G. Carlotti, J.-V. Kim, R. L. Stamps, R. E. Camley, B. Rana, Y. Otani, W. Yu, T. Yu, G. E. W. Bauer, C. Back, G. S. Uhrig, O. V. Dobrovolskiy, B. Budinska, H. Qin, S. van Dijken, A. V. Chumak, A. Khitun, D. E. Nikonov, I. A. Young, B. W. Zingsem, and M. Winklhofer,  
[J. Phys.: Condens. Matter \*\*33\*\*, 413001 \(2021\)](#) DOI: 10.1088/1361-648X/abec1a
31. *Inverse-design magnonic devices*  
Q. Wang, A. V. Chumak, and P. Pirro  
[Nat. Commun. \*\*12\*\*, 2636 \(2021\)](#) DOI: 10.1038/s41467-021-22897-4
32. *Spin-wave eigenmodes in direct-write 3D nanovolcanoes*  
O. V. Dobrovolskiy, N. R. Vovk, A. V. Bondarenko, S. A. Bunyaev, S. Lamb-Camarena, N. Zenbaa, R. Sachser, S. Barth, K. Y. Guslienko, A. V. Chumak, M. Huth, and G. N. Kakazei  
[Appl. Phys. Lett. \*\*118\*\*, 132405 \(2021\)](#) DOI: 10.1063/5.0044325
33. *Long-range spin-wave propagation in transversely magnetized nano-scaled conduits*  
B. Heinz, Q. Wang, M. Schneider, E. Weiß, A. Lentfert, B. Lägel, T. Brächer, C. Dubs, O. V. Dobrovolskiy, P. Pirro, and A. V. Chumak  
[Appl. Phys. Lett. \*\*118\*\*, 132406 \(2021\)](#) DOI: 10.1063/5.0045570
34. *Controlling the nonlinear relaxation of quantized propagating magnons in nanodevices*  
M. Mohseni, Q. Wang, B. Heinz, M. Kewenig, M. Schneider, F. Kohl, B. Lägel, C. Dubs, A. V. Chumak, and P. Pirro  
[Phys. Rev. Lett. \*\*126\*\*, 097202 \(2021\)](#) DOI: 10.1103/PhysRevLett.126.097202
35. *Engineered magnetization and exchange stiffness in direct-write Co-Fe nanoelements*  
S. A. Bunyaev, B. Budinska, R. Sachser, Q. Wang, K. Levchenko, S. Knauer, A. V. Bondarenko, M. Urbanek, K. Y. Guslienko, A. V. Chumak, M. Huth, G. N. Kakazei, and O. V. Dobrovolskiy  
[Appl. Phys. Lett. \*\*118\*\*, 022408 \(2021\)](#) DOI: 10.1063/5.0036361
36. *Temperature dependence of spin pinning and spin-wave dispersion in nanoscopic ferromagnetic waveguides*  
B. Heinz, Q. Wang, R. Verba, V. I. Vasyuchka, M. Kewenig, P. Pirro, M. Schneider, T. Meyer, B. Lägel, C. Dubs, T. Brächer, O. V. Dobrovolskiy, and A. V. Chumak  
[Ukr. J. Phys. \*\*65\*\*, 1094 \(2020\)](#) DOI: 10.15407/ujpe65.12.1094
37. *A nonlinear magnonic nano-ring resonator*  
Q. Wang, A. Hamadeh, R. Verba, V. Lomakin, M. Mohseni, B. Hillebrands, A. V. Chumak, and P. Pirro  
[npj Comput. Mater. \*\*6\*\*, 192 \(2020\)](#) DOI: 10.1038/s41524-020-00465-6
38. *Introduction to spin wave computing (Tutorial Article)*  
A. Mahmoud, F. Ciubotaru, F. Vanderveken, A. V. Chumak, S. Hamdioui, C. Adelman, and S. Cotofana  
[J. Appl. Phys. \*\*128\*\*, 161101 \(2020\)](#) DOI: 10.1063/5.0019328
39. *A magnonic directional coupler for integrated magnonic half-adders*  
Q. Wang, M. Kewenig, M. Schneider, R. Verba, F. Kohl, B. Heinz, M. Geilen, M. Mohseni, B. Lägel, F. Ciubotaru, C. Adelman, C. Dubs, S. D. Cotofana, O. V. Dobrovolskiy, T. Brächer,

- P. Pirro, and A. V. Chumak,  
[Nat. Electronics 3, 765 \(2020\)](#) DOI: 10.1038/s41928-020-00485-6
40. *Spin-wave spectroscopy of individual ferromagnetic nanodisks*  
O. V. Dobrovolskiy, S. A. Bunyaev, N. R. Vovk, D. Navas, P. Gruszecki, M. Krawczyk,  
R. Sachser, M. Huth, A. V. Chumak, K. Y. Guslienko, and G. N. Kakazei  
[Nanoscale 12, 21207 \(2020\)](#) DOI: 10.1039/D0NR07015G
41. *Opportunities and challenges for spintronics in the microelectronics industry*  
B. Dieny, I. L. Prejbeanu, K. Garello, P. Gambardella, P. Freitas, R. Lehndorff, W. Raberg,  
U. Ebels, S.O. Demokritov, J. Akerman, A. Deac, P. Pirro, C. Adelman, A. Anane,  
A. V. Chumak, A. Hirohata, S. Mangin, S. O. Valenzuela, M. Cengiz Onbaşlı, M. d’Aquino,  
G. Prenat, G. Finocchio, L. Lopez-Diaz, R. Chantrell, O. Chubykalo-Fesenko, and P. Bortolotti  
[Nat. Electr. 3, 446 \(2020\)](#) DOI: 10.1038/s41928-020-0461-5
42. *Ultra-fast vortex motion in a direct-write Nb-C superconductor*  
O. V. Dobrovolskiy, D. Yu. Vodolazov, F. Porrati, R. Sachser, V. M. Bevez, M. Yu. Mikhailov,  
A. V. Chumak, and M. Huth  
[Nat. Commun. 11, 3291 \(2020\)](#) DOI: 10.1038/s41467-020-16987-y
43. *Propagation of coherent spin-wave packets in individual nanosized yttrium iron garnet magnonic conduits*  
B. Heinz, T. Brächer, M. Schneider, Q. Wang, B. Lägél, A. M. Friedel, D. Breitbach,  
S. Steinert, T. Meyer, M. Kewenig, C. Dubs, P. Pirro, and A. V. Chumak  
[Nano Lett. 20, 4220 \(2020\)](#) DOI: 10.1021/acs.nanolett.0c00657
44. *Bose–Einstein condensation of quasiparticles by rapid cooling*  
M. Schneider, T. Brächer, D. Breitbach, V. Lauer, P. Pirro, D. A. Bozhko, H. Yu. Musiienko-  
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## List of Patents

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1. *Filtering device and process for filtering radiofrequency signals*  
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European Patent Application No. EP23200651.0. Patented at the University of Vienna, Faculty of Physics. The patent will be opened on 28.03.2025.

## List of Non-Peer-Reviewed Articles

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1. *The SpinTronicFactory roadmap: a European community view*  
B. Dieny, L. Prejbeanu, K. Garello, P. Freitas, R. Lehndorff, W. Raberg, U. Ebels, S. Demokritov, J. Akerman, P. Pirro, C. Adelman, A. Anane, A. Chumak, A. Hiroata, S. Mangin, M. d'Aquino, G. Prenat, G. Finocchio, L. Lopez Diaz, O. Chubykalo-Fesenko, P. Bortolotti  
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2. *Magnetische Materialien nach Maß für die Spintronik*  
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