

# Publication List of Elena Gati before joining MPI-CPfS

## Publications in Peer-Reviewed Journals

1. S.L. Bud'ko, **E. Gati**, T.J. Slade, and P.C. Canfield, *On magnetic order in van der Waals antiferromagnet CrPS<sub>4</sub>: anisotropic H-T phase diagrams and effects of pressure*, PRB **103**, 224407 (2021). [Link](#) (preprint: arXiv:2102.11869)
2. K. Rana, H. Kotegawa, R. R. Ullah, **E. Gati**, S. L. Bud'ko, P. C. Canfield, H. Tou, V. Taufour, and Y. Furukawa *Magnetic properties of the itinerant ferromagnet LaCrGe<sub>3</sub> under pressure studied by <sup>139</sup>La NMR*, Phys. Rev. B **103**, 174426 (2021). (*Editor's Suggestion*) [Link](#) (preprint: arXiv:2105.03479)
3. L. Xiang, **E. Gati**, S.L. Bud'ko, S.M. Saunders, P.C. Canfield, *Avoided ferromagnetic quantum critical point in pressurized La<sub>5</sub>Co<sub>2</sub>Ge<sub>3</sub>*, Phys. Rev. B **103**, 054419 (2021). [Link](#) (preprint: arXiv:2011.03086)
4. **E. Gati**, J.M. Wilde, R. Khasanov, L. Xiang, S. Dissanayake, R. Gupta, M. Matsuda, F. Ye, B. Haberl, U. Kaluarachchi, R.J. McQueeney, A. Kreyssig, S.L. Bud'ko, P.C. Canfield, *Formation of short-range magnetic order and avoided ferromagnetic quantum criticality in pressurized LaCrGe<sub>3</sub>*, Phys. Rev. B **103**, 075111 (2021). (*Editor's Suggestion*) [Link](#) (preprint: arXiv:2011.04416)
5. L. Xiang, **E. Gati**, S.L. Bud'ko, R.A. Ribeiro, A. Ata, U. Tutsch, M. Lang, P.C. Canfield, *Characterization of the pressure coefficient of manganin and temperature evolution of pressure in piston-cylinder cells*, Rev. Sci. Instrum. **91**, 095103 (2020). (*Editor's Suggestion*) [Link](#) (preprint: arXiv:2007.11703)
6. **E. Gati**, L. Xiang, S.L. Bud'ko, and P.C. Canfield, *Hydrostatic and uniaxial pressure tuning of iron-based superconductors: Insights into superconductivity, magnetism, nematicity and collapsed tetragonal transitions*, Annalen der Physik, 2000248 (2020) (*invited review article*). [Link](#) (preprint: arXiv:2005.09791)
7. A. Pustogow, T. Le, H. Wang, Y. Luo, **E. Gati**, H. Schubert, M. Lang, and S. Brown, *Impurity moments conceal low-energy relaxation of quantum spin liquids*, Phys. Rev. B **101**, 140401(R) (2020). [Link](#) (preprint: arXiv:1911.02057)
8. **E. Gati**, L. Xiang, S.L. Bud'ko, and P.C. Canfield, *Measurements of elastoresistance under pressure by combining in-situ tunable quasi-uniaxial stress with hydrostatic pressure*, Rev. Sci. Instrum. **91**, 023904 (2020). [Link](#) (preprint: arXiv:1911.08599)
9. **E. Gati**, A.E. Böhmer, S.L. Bud'ko and P.C. Canfield, *Bulk superconductivity and role of fluctuations in the iron-based superconductor FeSe at high pressures*, Phys. Rev. Lett. **123**, 167002 (2019). [Link](#) (preprint: arXiv:1907.01015)
10. L. Xiang, **E. Gati**, K. Neilson, S.L. Bud'ko and P.C. Canfield, *Physical properties of RBi<sub>2</sub> (R=La, Ce) under pressure*, Phys. Rev. Materials **3**, 095006 (2019). [Link](#) (preprint: arXiv:1907.08645)

11. **E. Gati**, Y. Inagaki, T. Kong, R.J. Cava, Y. Furukawa, P.C. Canfield and S.L. Bud'ko, *Multiple ferromagnetic transitions and structural distortion in the van-der-Waals ferromagnet  $VI_3$  at ambient and finite pressures*, Phys. Rev. B **100**, 094408 (2019) (*Editor's Suggestion*). [Link](#) (preprint: arXiv:1907.08550)
12. **E. Gati**, L.Xiang, S.L. Bud'ko and P.C. Canfield, *Role of Fermi surface for the pressure-tuned nematic transition in the  $BaFe_2As_2$  family*, Phys. Rev. B **100**, 064512 (2019). [Link](#) (preprint: arXiv:1907.11211)
13. S. K. Thallapaka, B. Wolf, **E. Gati**, L. Postulka, U. Tutsch, B. Schmidt, P. Thalmeier, F. Ritter, C. Krellner, Y. Li, V. Borisov, R. Valentí, M. Lang, *Magneto-structural properties of the layered quasi-2D triangular-lattice antiferromagnets  $Cs_2CuCl_{4-x}Br_x$  for  $x = 0, 1, 2$  and  $4$* , Phys. Status Solidi B, 1900044 (2019). [Link](#) (preprint: arXiv:1902.01099)
14. M. Matsuura, T. Sasaki, S. Iguchi, **E. Gati**, A. Nakao, A. Piovano, M. Böhm, O. Sobolev, J. Müller, O. Stockert, and M. Lang, *Lattice dynamics coupled to charge- and spin degrees of freedom in the molecular dimer-Mott insulator  $\kappa$ -(BEDT-TTF) $_2$ Cu[N(CN) $_2$ ]Cl*, Phys. Rev. Lett. **123**, 027601 (2019). [Link](#) (preprint: arXiv:1906.08590)
15. M. Ikeda, H. Euchner, X. Yan, P. Tomes, A. Prokofiev, L. Prochaska, G. Lientschnig, R. Svagera, S. Hartmann, **E. Gati**, M. Lang, S. Paschen, *Kondo-like phonon scattering in thermoelectric clathrates*, Nat. Commun. **10**, 887 (2019). [Link](#)
16. S. Hartmann, **E. Gati**, Y. Yoshida, G. Saito, M. Lang, *Thermal expansion studies on the spin-liquid candidate system  $\kappa$ -(BEDT-TTF) $_2$ Ag $_2$ (CN) $_3$* , Phys. Stat. Solidi B, 1800640 (2019). [Link](#)
17. **E. Gati**, G. Drachuck, L. Xiang, L. Wang, S.L. Bud'ko, P.C. Canfield, *Use of Cernox thermometers in AC specific heat measurements*, Rev. Sci. Instrum. **90**, 023911 (2019). [Link](#) (preprint: arXiv:1901.05089)
18. **E. Gati**, L. Xiang, L. Wang, S. Manni, P.C. Canfield, S.L. Bud'ko, *Effect of pressure on the physical properties of the superconductor  $NiBi_3$* , J. Phys.: Condens. Matter **31**, 035701 (2019). [Link](#) (preprint: arXiv:1809.07789)
19. L. Xiang, R.A. Ribeiro, U.S. Kaluarachchi, **E. Gati**, M.C. Nguyen, C.-Z. Wang, K.-M. Ho, S.L. Bud'ko, P.C. Canfield, *Pressure-induced multiple phase transformations of the  $BaBi_3$  superconductor*, Phys. Rev. B **98**, 214509 (2018). [Link](#) (preprint: arXiv:1808.10043)
20. **E. Gati**, J. Fischer, P. Lunkenheimer, D. Zielke, S. Köhler, F. Kolb, H-A. Krug von Nidda, S. Winter, H. Schubert, J.A. Schlueter, H. Jeschke, R. Valentí, M. Lang, *Evidence for electronically-driven ferroelectricity in the family of strongly correlated dimerized BEDT-TTF molecular conductors*, Phys. Rev. Lett. **120**, 247601 (2018). [Link](#) (preprint: arXiv:1711.07384)
21. **E. Gati**, S. Winter, J. A. Schlueter, H. Schubert, J. Müller, M. Lang, *Insights from experiment and ab initio calculations into the glass-like transition in the molecular conductor  $\kappa$ -(BEDT-TTF) $_2$ Hg(SCN) $_2$ Cl*, Phys. Rev. B **97**, 075115 (2018). [Link](#) (preprint: arXiv:1710.08629)

22. R.S. Manna, S. Hartmann, **E. Gati**, J.A. Schlueter, M. de Souza, M. Lang, *Low-temperature lattice effects in the spin-liquid candidate  $\kappa$ -(BEDT-TTF)<sub>2</sub>Cu<sub>2</sub>(CN)<sub>3</sub>*, Crystals **8**, 87 (2018). [Link](#)
23. **E. Gati**, U. Tutsch, A. Naji, M. Garst, S. Köhler, H. Schubert, T. Sasaki, M. Lang, *Effects of disorder on the pressure-induced Mott transition in  $\kappa$ -(BEDT-TTF)<sub>2</sub>Cu[N(CN)<sub>2</sub>]Cl*, Crystals **8**, 38 (2018) (Special Issue "Advances in Organic Conductors and Superconductors"). [Link](#)
24. **E. Gati**, M. Garst, R.S. Manna, U. Tutsch, B. Wolf, L. Bartosch, H. Schubert, T. Sasaki, J.A. Schlueter, M. Lang, *Breakdown of Hooke's law of elasticity at the Mott critical endpoint in an organic conductor*, Science Advances **2**, e1601646 (2016). [Link](#)
25. S. Knöner, **E. Gati**, S. Köhler, B. Wolf, U. Tutsch, S. Ran, M. Torikachvili, S.L. Bud'ko, P.C. Canfield, M. Lang, *Combined effects of Sr substitution and pressure on the ground states in CaFe<sub>2</sub>As<sub>2</sub>*, Phys. Rev. B **94**, 144513 (2016). [Link](#) (preprint: arXiv:1606.00141)
26. S. Knöner, **E. Gati**, B. Wolf, M. de Souza, A. Haghighirad, M. Kuhnt, W. Aßmus, H. Jeschke, M. Tomic, R. Valentí, M. Lang, *Combined experimental and theoretical studies of pressure effects in La<sub>2</sub>Sb*, Phys. Status Solidi B **254**, 1600168 (2016). [Link](#)
27. **E. Gati**, B. Wolf, J.A. Schlueter, M. Lang, *Dilatometric studies on single crystalline barlowite - a structurally perfect spin-1/2 kagome system*, Phys. Procedia **75**, 597 (2015). [Link](#)
28. H.O. Jeschke, F. Salvat-Pujol, **E. Gati**, N.H. Hoang, B. Wolf, M. Lang, J.A. Schlueter, R. Valentí, *Barlowite as a canted antiferromagnet: Theory and experiment*, Phys. Rev. B **92**, 094417 (2015). [Link](#) (preprint: arXiv:1412.4668)
29. V. Grinenko, W. Schottenhamel, A.U.B. Wolter, D.V. Efremov, S.L. Drechsler, S. Aswartham, M. Kumar, S. Wurmehl, M. Roslova, I.V. Morozov, B. Holzapfel, B. Büchner, E. Ahrens, S.I. Troyanov, S. Köhler, **E. Gati**, S. Knöner, N.H. Hoang, M. Lang, F. Ricci, G. Profeta, *Superconducting properties of K<sub>1-x</sub>Na<sub>x</sub>Fe<sub>2</sub>As<sub>2</sub> under pressure*, Phys. Rev. B **90**, 094511 (2014). [Link](#) (preprint: arXiv:1409.7800)
30. M. Lang, P. Lunkenheimer, J. Müller, A. Loidl, B. Hartmann, N.H. Hoang, **E. Gati**, H. Schubert, J. A. Schlueter, *Multiferroicity in the Mott insulating charge-transfer salt  $\kappa$ -(BEDT-TTF)<sub>2</sub>Cu[N(CN)<sub>2</sub>]Cl*, IEEE Trans. Magn. **6**, 2700107 (2014). [Link](#) (preprint: arXiv:1311.2715)
31. **E. Gati**, S. Köhler, D. Guterding, B. Wolf, S. Knöner, S. Ran, S.L. Bud'ko, P.C. Canfield, M. Lang, *Hydrostatic-pressure tuning of magnetic, nonmagnetic and superconducting states in annealed Ca(Fe<sub>1-x</sub>Co<sub>x</sub>)<sub>2</sub>As<sub>2</sub>*, Phys. Rev. B **86**, 220511(R) (2012) (*Editor's Suggestion*). [Link](#) (preprint: arXiv:1210.5398)
32. D.O. Charkin, A.V. Urmanov, S.M. Kazakov, D. Batuk, A.M. Abakumov, S. Knöner, **E. Gati**, B. Wolf, M. Lang, A.V. Shevelkov, G. Van Tendeloo, E.V. Antipov, *Synthesis, crystal structure, transport and magnetic properties of novel ternary copper*

phosphides,  $A_2Cu_6P_5$  ( $A = Sr, Eu$ ) and  $EuCu_4P_3$ , Inorg. Chem. **51**, 8948 (2012). [Link](#)

## Submitted Publications

1. K. Riedl, **E. Gati**, D. Zielke, S. Hartmann, O.M. Vyaselev, N.D. Kushch, H.O. Jeschke, M. Lang, R. Valenti, M.V. Kartsovnik, S.M. Winter, *Spin Vortex Crystal Order in Organic Triangular Lattice Compound*, arXiv:2106.02130 (2021). [Link](#)
2. **E. Gati**, S.L. Bud'ko, L.-L. Wang, A. Valadkhani, R. Gupta, B. Kuthanazhi, L. Xiang, J.M. Wilde, A. Sapkota, Z. Guguchia, R. Khasanov, R. Valenti, P.C. Canfield, *Pressure-induced ferromagnetism in the topological semimetal  $EuCd_2As_2$* , arXiv:2108.01871 (2021). [Link](#)

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