

Ivan Bozovic
RESEARCH PUBLICATIONS

SUMMARY

Nature 4, Science 4, Nature Physics 2, Nature Materials 5, Nature Nanotechnology 2, Nature Communications 1, Physical Review Letters 11, Europhysics Letters 1, Applied Physics Letters 9, Nano Letters 1, Advanced Materials 1, PNAS 1, Physical Review B 39 (Rapid Communications 12).

Total Letters and Rapid Communications: 51

Total papers in refereed scientific journals: 182

Invited papers in refereed conference proceedings: 22

Review chapters in books: 8

Total research papers: 237

Books and monographs: coauthored 1, (co)edited 11

Patents: 6 issued (listed below) and several pending (not listed here).

13 research papers labeled with an asterisk (# 197, 173, 168, 156, 152, 150, 139, 137, 91, 64, 63, 45, 42) are “classics”, each one cited between 100 and 600 times; few more are getting there.

The total number of citations: well over 6,500 are recorded in Google Scholar just for the journal papers cited in other journal papers, with the Hirsch index **$h = 41$** and g-index **$g = 76$** . This does not include citations of these papers in textbooks, proceedings, PhD theses, patents, etc., nor any citations of the remaining 49 papers from this list.

The list of scientists that cited some of these papers include 12 Nobel Laureates (J. Bardeen, N. Mott, V. L. Ginzburg, P. W Anderson, J. R. Schrieffer, A. Leggett, A. Heeger, K. A. Mueller, G. Bednorz, R. Laughlin, A. Abrikosov and R. Hoffmann). In particular, P. W. Anderson devoted several pages in his book on high-temperature superconductivity to the results from paper #113.

THE LIST OF PUBLICATIONS (in reverse chronological order)

254. J. Wu, A. T. Bollinger, Y.-J. Sun and I. Božović, “Hall Effect in quantum critical charge-cluster glass”, under review in ***Nature Materials*** (2015).
253. S. Dietrich, W. Mayer, S. Vitkalov, A. Sergeev, A. T. Bollinger and I. Božović, “Frequency dispersion of nonlinear response in films of cuprate superconductors”, submitted to ***Phys. Rev. B*** (2015).

252. V. A. Gasparov, X. He, G. Dubuis, D. Pavuna, N. D. Kushch, E. B. Yagubskii, J. A. Schlueter and I. Bozovic, "Magnetic field, frequency and temperature dependence of complex conductance of ultrathin $\text{La}_{1.65}\text{Sr}_{0.45}\text{CuO}_4/\text{La}_2\text{CuO}_4$ films and the organic superconductors - (BEDT-TTF)₂Cu[N(CN)₂]Br", to appear in *Physica C* (2015).
251. X. Leng and I. Bozovic, "Controlling superconductivity in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_{4+\delta}$ by ozone and vacuum annealing", *Journal of Superconductivity and Novel Magnetism* 28, 71-74 (2015).
250. I. Bozovic and C. Ahn, "A new frontier for superconductivity ", *Nature Physics* 10, 892-895 (2014).
249. G. Dubuis, X. He and I. Božović, "Ultra-thermal-stabilization of a closed cycle cryocooler", *Rev. Sci. Instr.* 85, 103902 (2014).
248. N. E. Litombe, A. T. Bollinger, J. E. Hoffman and I. Božović, "La_{2-x}Sr_xCuO₄ Superconductor Nanowire Devices", *Physica C* 506, 169-173 (2014).
247. F. Zheng, G. Logvenov, I. Bozovic, Y. Zhu and J. He, "Structural origin of enhanced critical temperature in ultrafine multilayers of cuprate superconducting films", *Phys. Rev. B* 89, 184509 (2014).
246. S. Smadici, G. Logvenov, I. Bozovic and P. Abbamonte, "Sequence of hole resonances in complex oxide heterostructures". *J. Phys. Cond. Mat.* 26, 155302 (2014).
245. P. D. C. King, H. I. Wei, Y. F. Nie, M. Uchida, C. Adamo, S. Zhu, X. He, I. Bozovic, D. G. Schlom, and K. M. Shen, "Atomic-scale control of competing electronic phases in ultrathin LaNiO₃", *Nature Nanotechnology* 9, 443-447 (2014).
244. S. Smadici, J. C. T. Lee, G. Logvenov, I. Bozovic and P. Abbamonte, "Form factor dispersion at La M5;4 edges and average density of resonant atoms", *J. Phys.: Condens. Matter* 26, 025303 (2014).
243. M. P. M. Dean, G. Dellea, R. S. Springell, F. Yakhou-Harris, K. Kummer, N. B. Brookes, X. Liu, Y.-J. Sun, J. Strle, T. Schmitt, L. Braicovich, G. Ghiringhelli, I. Bozovic and J. P. Hill, "Persistence of magnetic excitations in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ from the undoped insulator to the heavily overdoped non-superconducting metal, *Nature Materials* 12, 1019-23 (2013).
242. G. Dubuis, A. T. Bollinger, D. Pavuna and I. Božović, "On Field Effect Studies and Superconductor-Insulator Transition in High-T_c Cuprates", invited paper *Eur. Phys. J. Special Topics* 222, 1217–1221 (2013).
241. J. Wu, O. Pelleg, G. Logvenov, A. T. Bollinger, Y. Sun, G. S. Boebinger, M. Vanović, Z. Radović and I. Božović, "Anomalous independence of interface superconductivity on carrier density", *Nature Materials* 12, 877-881 (2013).

240. D. H. Torchinsky, F. Mahmood, A. T. Bollinger, I. Božović and N. Gedik, "Fluctuating charge density waves in a cuprate superconductor", *Nature Materials* 12, 387-391 (2013).
239. G. Logvenov, A. M. Gozar and I. Bozovic, "High Temperature Interface Superconductivity", Journal of Superconductivity and Novel Magnetism 6, 2863-5 (2013).
238. G. Dubuis, A. T. Bollinger, D. Pavuna and I. Božović, "Critical Resistance at the Superconductor-Insulator Transition in Hole-doped Cuprates", Journal of Superconductivity and Novel Magnetism 26, 749-754 (2013).
237. Y. Yacoby, H. Zhou, R. Pindak and I. Božović, "Atomic-layer synthesis and imaging uncover broken inversion symmetry in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ films", Phys. Rev. B 87, 014108 (2013).
236. X. Shi, D. Popović, C. Panagopoulos, G. Logvenov, A. T. Bollinger and I. Bozovic, "Emergence of superconductivity from the dynamically heterogeneous insulating state in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ ", *Nature Materials* 12, 47-51 (2013).
235. E. Stilp, A. Suter, T. Prokscha, E. Morenzoni, H. Keller, B. M. Wojek, H. Luetkens, A. Gozar, G. Logvenov and I. Bozovic, "Magnetic phase diagram of low-doped $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ thin films studied by low-energy muon-spin rotation", Phys. Rev. B 88, 064419 (2013).
234. M. P. M. Dean, R. S. Springell, C. Monney, K. J. Zhou, I. Bozovic, J. Pereiro, B. Dalla Piazza, H. M. Ronow, J. van den Brink, T. Schmitt and J. P. Hill, "Spin Excitations in a single La_2CuO_4 layer", *Nature Materials* 11, 850-4 (2012).
233. S. Smadici, J. C. T. Lee, A. Rusydi, G. Logvenov, I. Bozovic and P. Abbamonte, "Distinct oxygen hole doping in different layers of $\text{Sr}_2\text{CuO}_{4-\delta}/\text{La}_2\text{CuO}_4$ superlattices", Phys. Rev. B 85, 094519 (2012).
232. I. Sochnikov, I. Bozovic A. Shaulov and Y. Yesurun, "Fluxoid quantization effects in high-Tc superconducting double networks", Journal of Physics: Conference Series 400, 022109 (2012).
231. J. Pereiro, J. T. Sadowski, B. Lin, C. Panagopoulos & I. Bozovic, "Low-energy electron microscope study of tobacco mosaic viruses", J. Nano Science Letters, 2, 29 (2012).
230. G. Dubuis, A. T. Bollinger, D. Pavuna & I. Božović, "Electric field effect on superconductivity in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ ", J. Appl. Phys. 111, 112632 (2012).
229. V. Gasparov and I. Božović, "Magnetic field and temperature dependence of complex conductance of ultrathin $\text{La}_{1.65}\text{Sr}_{0.45}\text{CuO}_4/\text{La}_2\text{CuO}_4$ films", Phys. Rev. B 86, 094523 (2012).

228. A. T. Bollinger, J. N. Eckstein, G. Dubuis, D. Pavuna and I. Božović, "Atomic-Layer Engineering of Oxide Superconductors", in Oxide-based Materials and Devices III, edited by F. H. Teherani, D. C. Look and D. J. Rogers, Proc. SPIE **8263**, 82631C (2012)
227. X. Shi, D. Popović, C. Panagopoulos, G. Logvenov, A. T. Bollinger and I. Bozovic, "History dependent magnetoresistance in lightly doped $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ thin films", Physica B – Cond. Mat. Phys. 407, 1915–1918 (2012)
226. J. Pereiro, A. T. Bollinger, G. Logvenov, A. Gozar, C. Panagopoulos and I. Božović, "Insights from study of high-temperature interface superconductivity", Phil. Trans. R. Soc. A **370**, 4890–4903 (2012).
225. A. Suter, E. Morenzoni, T. Prokscha, H. Luetkens, B. M. Wojek, G. Logvenov, A. Gozar, and I. Bozovic, "Superconductivity in $\text{La}_{1.56}\text{Sr}_{0.44}\text{CuO}_4/\text{La}_2\text{CuO}_4$ superlattices", Physics Procedia **30**, 271-274 (2012).
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223. I. Sochnikov, I. Bozovic A. Shaulov and Y. Yeshurun, Uncorrelated behavior of fluxoids in superconducting double networks, Phys. Rev. B 84, 094530 (2011).
222. L. S. Bilbro, R. Valdes Aguilar, G. Logvenov, I. Bozovic, and N. P. Armitage, "On the possibility of fast vortices in the cuprates: A vortex plasma model analysis of THz conductivity and diamagnetism in $\text{La}_{2-x}\text{Sr}_x\text{Cu}_4$ ", Phys. Rev. B 84, 100511(R) (2011).
221. M. Beyer, D. Städter, M. Beck, H. Schäfer, V. V. Kabanov, G. Logvenov, I. Bozovic, G. Koren, and J. Demsar, "Photoinduced melting of superconductivity in the high-Tc superconductor $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ probed by time-resolved optical and terahertz techniques", Phys. Rev. B 83, 214515 (2011).
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218. A. Suter, E. Morenzoni, T. Prokscha, B. M. Wojek, H. Luetkens, G. Nieuwenhuys, A. Gozar, G. Logvenov and I. Bozovic, "Two-Dimensional Magnetic and Superconducting Phases in Metal-Insulator $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ Superlattices Measured by Muon-Spin Rotation", *Phys. Rev. Letters* **106**, 237003 (2011).
217. A. T. Bollinger, G. Dubuis, J. Yoon, D. Pavuna, J. Misewich & I. Bozovic, "Superconductor-insulator transition in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ at the pair quantum resistance", *Nature* **472**, 458-460 (2011).

216. E. Morenzoni, B. M. Wojek, A. Suter, T. Prokscha, G. Logvenov & I. Bozovic, "The Meissner effect in a strongly underdoped cuprate above its critical temperature", *Nature Communications* 2, 272 (2011).
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213. I. Sochnikov, A. Shaulov, Y. Yeshurun, G. Logvenov and I. Bozovic, "Oscillatory magnetoresistance in nanopatterned superconducting $\text{La}_{1.84}\text{Sr}_{0.16}\text{CuO}_4$ films", *Phys. Rev. B* 82, 094513 (2010)
212. I. Bozovic, "Theodore H. Geballe at 90", *Journal of Superconductivity and Novel Magnetism* **23**, 1419 (2010).
211. I. Bozovic, "On Ginzburg, Nobel, and atomic-layer engineering of room-temperature superconductors", in a monograph in memory of V. L. Ginzburg, ed. by E. G. Maksimov (Moscow, Russia, 2010).
210. J. A. Clayhold, O. Pelleg, D. W. Rench, B. M. Kerns, M. D. Schroer, D. C. Ingram, A. T. Bollinger, G. Logvenov, I. Bozovic, "Constraints on Models of Electrical Transport in Optimally Doped $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ from Measurements of Radiation-Induced Defect Resistance", *Journal of Superconductivity and Novel Magnetism* **23**, 339-342 (2010).
209. H. Zhou, Y. Yacoby, V. Butko, G. Logvenov, I. Bozovic and R. Pindak, "Anomalous Expansion of the Copper-Apical Oxygen Distance in Superconducting $\text{La}_2\text{CuO}_4 - \text{La}_{1.55}\text{Sr}_{0.45}\text{CuO}_4$ Bilayers", *Proc. Nat. Acad. Sci.* 107, 8103-8107 (2010). [Singled out as one of the year's key results in the 2010 APS Science Annual Report.]
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207. T. Hong, S. J. Heo, J. H. Kim and I. Bozovic, "Time-Domain Terahertz Spectroscopy of LaSrAlO_4 ", Proc. 34th International Conference on Infrared, Millimeter, and Terahertz Waves (IRMMW-THz 2009), Sept. 21-25, 2009 Busan, South Korea, Vols. 1 & 2, pp. 790-791 (2009).
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205. J. A. Clayhold, O. Pelleg, A. T. Bollinger, G. Logvenov, B. M. Kerns, M. D. Schroer, D. W. Rench and I. Bozovic, Statistical Characterization and Process Control for Improved Growth of $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ Films, *Journal of Superconductivity and Novel Magnetism* 22, 797–804 (2009).
204. I. Božović, G. Logvenov, A. Gozar, A. Bollinger, O. Pelleg, Z. Radović and N. Božović, “Nano-structured films of cuprate superconductors and other complex oxides: MBE synthesis, characterization, and engineered properties”, (Invited Keynote paper) Proc. ICCE-17, ed. by D. Hui, 2009.
203. V. Butko, G. Logvenov, N. Bozovic, Z. Radovic and I. Bozovic, “Madelung Strain in Cuprate Superconductors – A Route to Enhancement of the Critical Temperature”, *Advanced Materials* 21, 3644-3688 (2009).
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201. S. Smadici, J. C. T. Lee, S. Wang, P. Abbamonte, A. Gozar, G. Logvenov, C. Deville Cavellin and I. Bozovic, “Superconducting Transition at 38 K in Insulating-Overdoped $\text{La}_2\text{CuO}_4\text{-La}_{1.64}\text{Sr}_{0.36}\text{CuO}_4$ Superlattices: Evidence for Interface Electronic Redistribution from Resonant Soft X-Ray Scattering”, *Phys. Rev. Letters* 102, 107004 (2009).
200. I. Bozovic, A. Gozar, G. Logvenov, A. Bollinger, N. Bozovic and Zoran Radovic, “Insights in high-temperature superconductivity from the study of films and heterostructures synthesized by molecular beam epitaxy”, *Journal of Superconductivity and Novel Magnetism* 22, 223-7 (2009).
199. N. Bozovic, I. Bozovic, and J. Misewich, “X-ray Nanocrystallography of Individual Carbon Nanotubes”, *Nano Letters* 8, 4477–4482 (2008). [Highlighted by A. Sandhu, *Nature Nanotechnology*, doi:10.1038/nnano.2008.347, published online 7 November 2008.]
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heterostructures", (invited) Proc. 3rd International conference "On problems of High Temperature Superconductivity" ed. by V. Pudalov and I. Mitsin, Zvenigorod, Russia (2008).

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