

Ivan Bozovic
RESEARCH PUBLICATIONS
(1974-2013)

SUMMARY

Nature 4, Science 4, Nature Physics 1, Nature Materials 5, Nature Nanotechnology 1, 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: 50

Total papers in refereed scientific journals: 179

Invited papers in refereed conference proceedings: 20

Review chapters in books: 8

Total research papers: 228

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 just for the journal papers cited in other journal papers, with the Hirsch index **h = 40** 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)

244. S. Smadici, J. C. T. Lee, G. Logvenov, I. Bozovic and P. Abbamonte, “Form factor dispersion at La $M_{5,4}$ 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. Yakhov-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. Vanević, 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. I. Sochnikov, I. Bozovic A. Shaulov and Y. Yeshurun, “Fluxoid quantization effects in high- T_c superconducting double networks”, Journal of Physics: Conference Series 400, 022109 (2012).
233. S. Smadici, J. C. T. Lee, A. Rusydi, G. Logvenov, I. Bozovic and P. Abamonte, “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. 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).
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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 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).
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220. S. Smadici, J. C. T. Lee, J. Morales, G. Logvenov, O. Pelleg, I. Bozovic, Y. Zhu, and P. Abbamonte, “Graded orbital occupation near interfaces in a $\text{La}_2\text{NiO}_4\text{-La}_2\text{CuO}_4$ superlattice”, Phys. Rev. B **84**, 155411 (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).
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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).
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198. H. Shim, P. Chaudhari, G. Logvenov and I Bozovic, "Quasiparticle tunneling across a $\text{La}_{1.84}\text{Sr}_{0.16}\text{CuO}_4$ superconductor grain boundary junction", **Phys. Rev. Letters** 101, 247004 (2008).
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tific American, MRS Bulletin, Superconductor Week, Washington Post, Reuters, and several hundred web sites in US, United Kingdom, Germany, Italy, Serbia, Russia, Turkey, Hungary, India, China, Vietnam, Malaysia, Saudi Arabia, etc.; listed as the Most Emailed Science News by Yahoo News and as the #3 on the 2008 top list of the American Ceramic Society.]

196. I. Božović, G. Logvenov, V. Butko, A. Gozar, A. Bollinger, O. Pelleg, N. Božović and Z. Radović, "Insights in high- T_c superconductivity from the study of MBE-grown films and 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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