Curriculum Vitae

RICINSCHI DAN

WORK ADDRESS:
Tokyo Institute of Technology,
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PERSONAL INFORMATION

- Age: 47
- Nationality: Romanian

UNIVERSITY EDUCATION

- 1990/10/1-1995/7/15: Bachelor Degree, Faculty of Physics, "A. I. Cuza" University, Romania;
- 1995/10/1-1996/7/15: Master Degree, Faculty of Physics, "A. I. Cuza" University, Romania;
- 1997/10/6-1998/3/31: Research Student, Graduate School of Enginerring Science, Osaka University, Japan;
- 1998/4/1-2001/3/31: Doctor Degree in Science, Graduate School of Engineering Science, Osaka University, Japan; PhD receipt date: 2001/3/23;
- 2006/9/18: Doctor of Science (Physics), "A. I. Cuza" University, Romania.

EMPLOYMENT

- 1995/09/01-1997/08/31: Physics Teacher, High School No. 4, Roman, ROU;
- 1996/10/01-1997/09/30: Research Assistant, Faculty of Physics, "A. I. Cuza" University, Romania (research on ferroelectric materials);
- 1998/04/01-2001/03/31: Teaching Assistant, Graduate School of Engineering Science, Osaka University, Japan (students' experiments);
- 2001/04/01-2001/10/01: Invited Foreign Researcher, Graduate School of Engineering Science, Osaka University, Japan ("Low Temperature Preparation of Ferroelectric Thin Films for Nonvolatile Memory" project of the Semiconductor Technology Academic Research Center (STARC));

- 2001/10/02-2003/10/01: Special Foreign Researcher (Japan Society for the Promotion of Science postdoctoral fellow), Graduate School of Engineering Science, Osaka University, Japan ("Mechanism analysis of polarization reversal in ferroelectric thin films and reduction of dielectric degradation");
- 2003/10/02-2006/07/31: Researcher, Graduate School of Engineering Science, Osaka University, ("Research on new materials with improved properties by first-principles calculations", cooperation with Panasonic corporation);
- 2006/08/01-2010/03/31: Assistant Professor, Graduate School of Engineering Science, Osaka University, Japan ("Materials and processes using the principle of fluctuations in living bodies" Yuragi project of Osaka University);
- 2010/04/01-2015/03/31: Associate Professor, Interdisciplinary Graduate School of Science and Engineering, Tokyo Institute of Technology, Japan (internationalized education of graduate students, scientific research)
- 2015/04/01-up to present: Associate Professor, Innovator and Development Platform, Tokyo Institute of Technology, Japan (internationalized education of graduate students, scientific research)

RECOGNITION BY ACADEMIC COMMUNITY

- Citations of scientific results: 1229 (according to Google Scholar);
- h-index: 16 (by Google Scholar), 15 (by Scopus), 14 (by Web of Science)

GENERAL CONTRIBUTIONS TO SCIENCE AND TECHNOLOGY

- Published papers, lectures and invited/contributed presentations in the field of electroceramics, multifunctional thin films, electric property reliability, computer simulation, first-principles calculations;
- Published 66 peer-reviewed papers, 2 book chapters and have presented in person more than 40 papers at international conferences in Japan, Europe, Asia, Oceania and South America.

PROFESIONAL AFFILIATIONS, SERVICE TO SCIENTIFIC COMMUNITY

- Member of *Japan Society of Applied Physics* (1998-), *MRS-Japan* (2017-);
- Associate Editor (2014-), Section Editor (2018-) of *Journal of Electronic Materials*
- Member of Editorial Board of *International Scholarly Research Network: Materials Science* (2011-2013)

- Referee for international journals (selection): Science, *Nature Communications*, *Nature Materials*, *Journal of Physics: Condensed Matter*, *Journal of Physics D: Applied Physics*, *Journal of Applied Physics*, *Applied Physics Letters*, *Journal of Physical Society of Japan*, *Applied Surface Science*, *Physics Letters A*, *Nanotechnology*, *Thin Solid Films*, *Physica B*, *Journal of Materials Science and Engineering B*, *IEEE Transactions on Ultrasonics, Ferroelectrics and Freqency Control*, *Ferroelectrics*, *Journal of European Ceramic Society*, *Applied Physics A*, *Materials Letters*, *Journal of Alloys and Compounds*, *ISRN Materials Science*, *Measurement Science and Technology*, *Ceramics International*, *International Journal of Modern Physics B Journal of Electronic Materials*, *Scientific Reports*..

RESEARCH TOPICS

- Ab -initio computational design of multifunctional materials (multiferroics, thermoelectrics, photovoltaics);
- First-principles calculations based on Density Functional Theory;
- Next-generation nonvolatile memories based on complex oxide materials;
- Materials for energy applications (photocatalysis, artificial photosynthesis);
- Structure-property relationships in electroceramics and thin films;
- Electromechanical properties at micro- and nano-scale;
- Reliability studies of microelectronic component materials;
- Energy minimization techniques and continuum modeling;
- Thin film preparation by Pulsed Laser Deposition and sol-gel technique;
- Smart materials for neuron applications and unconventional computing.

A. Selection of Peer-Reviewed Papers in Academic Journals **(Total Times Cited by Others according to Web of Science: 919)**

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1. *Strain Dependent Electronic Structure and Band Offset Tuning at Heterointerfaces of $ASnO_3$ (A = Ca, Sr, and Ba) and $SrTiO_3$*, J. D. Baniecki, T. Yamazaki, D. Ricinschi, Q. Van Overmeere, H. Aso, Y. Miyata, H. Yamada, N. Fujimura, R. Maran, T. Anazawa, N. Valanoor, and Y. Imanaka, **Scientific Reports** 7 41725 (12 pages & 12 pages supplemental information) (2017)

2. *Interface energetics and atomic structure of epitaxial $La_{1-x}Sr_xCoO_3$ on $Nb:SrTiO_3$*, Q. van Overmeere, J. D. Baniecki, T. Yamazaki, D. Ricinschi, H. Aso, Y. Miyata, H. Yamada, N. Fujimura, Y. Kataoka and Y. Imanaka, **Applied Physics Letters** 106 241602 (5 pages) (2015);

3. *Relationship between source/drain-contact structures and switching characteristics in oxide-channel ferroelectric-gate thin-film transistors*, K. Haga, Y. Nakada, D. Ricinschi and E. Tokumitsu, **Japanese Journal of Applied Physics**, 53 09PA07 (6 pages) (2014);

4. *Density functional theory study on how electron spin configuration of Co3+ ion affects the structure and magnetism of Co-doped bismuth ferrite,* D. Ricinschi, **Japanese Journal of Applied Physics**, 52 09KB01 (5 pages) (2013);

5. *Density functional theory and experimental study of the electronic structure and transport properties of La, V, Nb, and Ta doped $SrTiO_3$*, J. D. Baniecki, M. Ishii, H. Aso, K. Kurihara, and D. Ricinschi, **Journal of Applied Physics** 113, 013701 (11 pages) (2013);

6. *Enhancement of electrical properties in polycrystalline $BiFeO_3$ thin films*, K. Y. Yun, D. Ricinschi, T. Kanashima and M. Okuyama, **Applied Physics Letters** 192902 (3 pages) (2006); 152 CITATIONS

7. *A mechanism for the 150 $\mu C/cm^2$ polarization of $BiFeO_3$ films based on first-principles calculations and new structural data*, D. Ricinschi, K. Y. Yun and M. Okuyama, **Journal of Physics: Condensed Matter** 18 L97-L105 (2006); **CITED BY SCIENCE,** 167 CITATIONS

8. *Giant ferroelectric polarization beyond 150 $\mu C/cm^2$ in $BiFeO_3$ thin film,* Y. Yun, D. Ricinschi, T. Kanashima, M. Noda and M. Okuyama, **Japanese Journal of Applied Physics** 43 L647-L648 (2004); **WON JSAP AWARD** 298 CITATIONS

9. *First-Order Reversal Curves Diagrams for the characterization of the ferroelectric switching*, A. Stancu, D. Ricinschi, L. Mitoseriu, P. Postolache and M. Okuyama, **Applied Physics Letters** 83 3767-3769 (2003); 81 CITATIONS

10. *Analysis of ferroelectric switching in finite media as a Landau type phase transition*, D. Ricinschi, C. Harnagea, C. Papusoi, L. Mitoseriu, V. Tura and M. Okuyama, **Journal of Physics: Condensed Matter** 10, 477-492, (1998); 86 CITATIONS