

LISTA DE LUCRĂRI Gelu-Marius Rotaru

Lista de lucrări considerate a fi cele mai relevante pentru realizările profesionale proprii;

1. A Dąbrowska, **G.-M Rotaru**, F Spano, C Affolter, G Fortunato, S Lehmann, Siegfried Derler, N D Spencer, R M Rossi
A water-responsive, gelatine-based human skin model Tribology International 113, 316-322, 2017
2. G Yazgan, RI Dmitriev, V Tyagi, J Jenkins, **G.-M. Rotaru**, M Rottmar R. M Rossi, C. Toncelli, D. B Papkovsky, K. Maniura-Weber, G. Fortunato
Steering surface topographies of electrospun fibers: understanding the mechanisms
Scientific reports 7 (1), 1-13, 2017
3. AK Dąbrowska, **G.-M. Rotaru**, S Derler, F Spano, M Camenzind, S. Annaheim, R. Stämpfli, M. Schmid and R. M. Rossi
Materials used to simulate physical properties of human skin
Skin Research and Technology 22 (1), 3-14, 2016
4. **G.-M. Rotaru**, D. Pille, F. K. Lehmeier, R. Stämpfli, A. Scheel-Sailer, R. M. Rossi, and S. Derler
Friction between human skin and medical textiles for decubitus prevention,
Tribology International 65, 91-96, 2013
5. S. Derler, J. Stuess, A. Rao and **G.-M. Rotaru**,
Influence of variations in the pressure distribution on the friction of the finger pad
Tribology International, 63, 14–20, 2013
6. R. A. Cowley, S. N. Gvasaliya, S. G. Lushnikov, B. Roessli, **G. -M. Rotaru**,
Relaxing with relaxors: a review of relaxor ferroelectrics
Advances in Physics, 60:2, 229-327, 2011
7. **G.-M. Rotaru**, B. Padmanabhan, S. N. Gvasaliya, B. Roessli, T. Strässle, R. A. Cowley, S. G. Lushnikov, and S. Klotz
Study of diffuse scattering under hydrostatic pressure in $\text{PbMg}_{1/3}\text{Nb}_{2/3}\text{O}_3$
Journal of Physics: Conference Series, 251, 012011, 2010
8. **G.-M. Rotaru**, S.N. Gvasaliya, B. Roessli, S. Kojima, S.G. Lushnikov, and P. Günter,
Evolution of the neutron quasielastic scattering through the ferroelectric phase transition in $93\%\text{PbZr}_{1/3}\text{Nb}_{2/3}\text{O}_3$ - $7\%\text{PbTiO}_3$
Applied Physics Letters 93, 032903, 2008
9. **G.-M. Rotaru**, S.N. Gvasaliya, V. Pomjakushin , B. Roessli, T. Strässle, S.G. Lushnikov, T. A. Shaplygina , P. Günter,
Atomic displacements in $\text{PbMg}_{1/3}\text{Nb}_{2/3}\text{O}_3$ under high pressures
Journal of Physics: Condensed Matter 20 (10), 104235, 2008
10. **G.-M Rotaru**, W. Tirry, P. Sittner, J. Van Humbeeck, D. Schryvers
Microstructural study of equiatomic P1Ti martensite and the discovery of a new long-period structure
Acta materialia 55 (13), 4447-4454, 2007

Teza de doctorat

Titlul tezei: Statics and dynamics of polar nanoregions in Pb based relaxors

Coordonatori: Dr. Bertrand Roessli, Dr. Severian Gvasaliya, Prof. Dr. Peter Günter și Prof. Dr. Joël François Mesot, Universitatea Politehnică Federală din Zurich, Elveția.



Publicații in extenso, apărute în lucrări ale principalelor conferințe internaționale de specialitate;

1. Y. Qu, T. Nguyen-Dang, A. G. Page, W. Yan, T. D. Gupta, G.-M. Rotaru, R. M. Rossi, V. D. Favrod, N. Bartolomei, F. Sorin Stretchable Optical and Electronic Fibers via Thermal Drawing
International Flexible Electronics Technology Conference (IFETC), 2018

Articole/studii in extenso, publicate în reviste din fluxul științific internațional principal

1. G.-M. Rotaru, E. Codjovi, P.-R. Dahoo, I. Maurin, J. Linares, A. Rotaru
Monitoring spin-crossover properties by diffused reflectivity"
Symmetry 13, 2021
2. Y Qu, T Nguyen-Dang, AG Page, W Yan, T Das Gupta, G.-M Rotaru, R. M. Rossi, V. D. Favrod, N. Bartolomei, F. Sorin
Superelastic multimaterial electronic and photonic fibers and devices via thermal drawing,
Advanced Materials 30 (27), 1707251, 2018
3. A Dąbrowska, G.-M Rotaru, F Spano, C Affolter, G Fortunato, S Lehmann, Siegfried Derler, N D Spencer, R M Rossi
A water-responsive, gelatine-based human skin model
Tribology International 113, 316-322, 2017
4. G Yazgan, RI Dmitriev, V Tyagi, J Jenkins, G.-M. Rotaru, M Rottmar R. M Rossi, C. Toncelli, D. B Papkovsky, K. Maniura-Weber, G. Fortunato,
Steering surface topographies of electrospun fibers: understanding the mechanisms
Scientific reports 7 (1), 1-13, 2017
5. A. K. Dąbrowska, C. Adlhart, F. Spano, G.-M. Rotaru, S. Derler, L. Zhai, N. D. Spencer, and R. M. Rossi
In vivo confirmation of hydration-induced changes in human-skin thickness, roughness and interaction with the environment
Biointerphases 11, 031015 (2016)
6. AK Dąbrowska, G.-M. Rotaru, S Derler, F Spano, M Camenzind, S. Annaheim, R. Stämpfli, M. Schmid and R. M. Rossi
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7. W Ke, G.-M. Rotaru, JY Hu, RM Rossi, X Ding, S Derler,
In Vivo Measurement of the Friction between Human Skin and Different Medical Compression Stockings
Tribology Letters 60 (1), 1-9, 2015
8. S. Derler, M. Preiswerk, G.-M. Rotaru, J.P. Kaiser, R.M. Rossi
Friction mechanisms and abrasion of the human finger pad in contact with rough surfaces
Tribology International 89 (2015): 119-127
9. S. Derler, R. M. Rossi, and G.-M. Rotaru
Understanding the variation of friction coefficients of human skin as a function of skin hydration and interfacial water films
Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology 2015
10. W. Ke, G.-M. Rotaru, J.Y. Hu, X. Ding, R.M. Rossi, S. Derler
Relationship between the friction and microscopic contact behavior of a medical compression stocking at different strains
Tribology Letters 56 (3), 457-470, 2014
11. G.-M. Rotaru, D. Pille, F. K. Lehmeier, R. Stämpfli, A. Scheel-Sailer, R. M. Rossi, and S. Derler
Friction between human skin and medical textiles for decubitus prevention,
Tribology International 65, 91-96, 2013



12. Derler, S., and **G.-M. Rotaru**,
Stick-slip phenomena in the friction of human skin
Wear 301, no. 1, 324-329, 2013
13. S. Derler, J. Süess, A. Rao and **G.-M. Rotaru**,
Influence of variations in the pressure distribution on the friction of the finger pad
Tribology International, 63, 14–20, 2013
14. A. Rotaru, A. Graur, **G.-M. Rotaru**, J. Linares and Y. Garcia,
Influence of intermolecular interactions and size effect on LITH-FORC diagram in 1D spin crossover compounds
Journal of Optoelectronics and Advanced Materials, 14, 5, 529, 2012
15. S. N. Gvasaliya, A. Cervellino, B. Roessli, **G.-M. Rotaru**, R. A. Cowley, S. G. Lushnikov, T. A. Shaplygina, and L. Bouchenoire.
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Journal of Physics: Condensed Matter 24, 45, 455401, 2012
16. A. Cervellino, S. N. Gvasaliya, B. Roessli, **G.-M. Rotaru**, R. A. Cowley, S. G. Lushnikov, T. A. Shaplygina, A. Bossak, and D. Chernyshov,
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Physical Review B 86, 10, 104107, 2012
17. R. A. Cowley, S. N. Gvasaliya, S. G. Lushnikov, B. Roessli, **G.-M. Rotaru**,
Relaxing with relaxors: a review of relaxor ferroelectrics
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18. A. Cervellino, S. Gvasaliya, O. Zaharko, B. Roessli, **G.-M. Rotaru**, R. A. Cowley, S. G. Lushnikov, T. Shaplygina, and M. Fernandez-Diaz
Diffuse scattering from the lead-based relaxor ferroelectric $\text{PbMg}_{1/3}\text{Ta}_{2/3}\text{O}_3$
J. Appl. Cryst. 44, 603-609, 2011
19. **G.-M. Rotaru**, B. Padmanabhan, S. N. Gvasaliya, B. Roessli, T. Strässle, R. A. Cowley, S. G. Lushnikov, and S. Klotz
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20. **G.-M. Rotaru**, B. Roessli, A. Amato, S.N. Gvasaliya, C. Mudry, S.G. Lushnikov, and T.A. Shaplygina
Spin glass state and long-range magnetic order in $\text{Pb}(\text{Fe}_{1/2}\text{Nb}_{1/2})\text{O}_3$ seen via neutron scattering and muon spin rotation
Physical Review B, 79, 184430, 2009.
21. **G.-M. Rotaru**, S.N. Gvasaliya, B. Roessli, S. Kojima, S.G. Lushnikov, and P. Günter,
Evolution of the neutron quasielastic scattering through the ferroelectric phase transition in $93\%\text{PbZn}_{1/3}\text{Nb}_{2/3}\text{O}_3$ - $7\%\text{PbTiO}_3$
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Atomic displacements in $\text{PbMg}_{1/3}\text{Nb}_{2/3}\text{O}_3$ under high pressures
Journal of Physics: Condensed Matter 20 (10), 104235, 2008
23. **G.-M. Rotaru** and D. Schryvers
New (3-3) long-period microtwin variant in the martensitic phase of the PtTi alloy
Materials Science and Engineering: A, 2008
24. **G.-M. Rotaru**, W. Tirry, P. Sittner, J. Van Humbeeck, D. Schryvers
Microstructural study of equiatomic PtTi martensite and the discovery of a new long-period structure
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