



Curriculum Vitae - February, 22th 2023

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Education:

- 2012 - 2017** PhD in Physics at University of São Paulo, Brazil. (Antonio Carlos Hernandez)
- 2016 - 2017** Research internship at Aix-Marseille Université, France. (Olivier Thomas)
- 2010 - 2012** Masters in Physics at Federal University of Maranhão, Brazil. (Carlos William Paschoal)
- 2006 - 2010** Bachelor in Physics at Federal University of Maranhão, Brazil. (Carlos William Paschoal)

Employments:

- 2020 - now** Post-Doctoral Fellow (Physics) (Experiments Division)
European Synchrotron Radiation Facility, ESRF, France. (Olivier Mathon/Angelika Rosa)
- 2018 - 2020** Post-Doctoral Fellow (Physics) (Department of Energy and Environment)
Instituto de Ciencia de Materiales de Madrid, ICMM-CSIC, Spain. (José Antonio Alonso/
Carlos Pecharrromán)
- 2017 - 2018** Post-Doctoral Fellow (Physics) (Department of Physics)
Federal University of São Carlos, Brazil. (Paulo Sergio Pizani)

Research Areas:

1. Structural and electronic properties under extreme conditions
2. Neutron and synchrotron x-ray diffraction
3. X-ray absorption spectroscopy
4. Raman spectroscopy
5. Impedance spectroscopy in electroceramics
6. X-ray photoelectron spectroscopy
7. Microwave spectroscopy of dielectric resonators
8. High-pressure synthesis of thermoelectric materials
9. Perovskites-, halides-, spinels-, and ilmenite-based compounds

Production:

Total articles: **50**

Sum of the times cited (Google Scholar): **462**

h-index: **13**

5 Selected Papers:

- 1) **RODRIGUES, J.E.** CHEMISTRY OF MATERIALS, v. 34, p. 1213-1224, 2022.
- 4) **RODRIGUES, J.E.** INORGANIC CHEMISTRY, v. 60, p. 7413-7421, 2021.
- 3) **GAINZA, J.** ADVANCED FUNCTIONAL MATERIALS, v. 3, p. 2001651, 2020.
- 4) **MIJITI, Y.** PHYSICAL REVIEW B, v. 103, p. 024105, 2021.
- 5) **RODRIGUES, J.E.** INDUST. ENGINEER. CHEMISTRY RESEARCH, v. 60, p. 18918-18928, 2021.

Most Frequent Collaborators:

- 1) **José António Alonso.** ICMM-Madrid. e-mail: ja.alonso@icmm.csic.es.
Active collaboration for synthesis and structural characterization of different materials to be used in energy conversion, magnetic devices, sensors.
- 2) **Carlos Pecharromán.** ICMM-Madrid. e-mail: cpg@icmm.csic.es.
Active collaboration for vibrational investigation using reflectance infrared spectroscopy in ceramics, single-crystals, and amorphous compounds.
- 3) **O. Mathon and A. Rosa.** ESRF-Grenoble. e-mail: mathon@esrf.fr/angelika.rosa@esrf.fr.
Active collaboration for X-ray absorption spectroscopy under extreme conditions at the stations of beamlines BM23/ID24 from the European Synchrotron Radiation Facility.
- 4) **Philippe Colombar.** Sorbonne Université-Paris. e-mail: philippe.colombar@sorbonne-universite.fr.
Active collaboration for low-wavenumber Raman spectroscopy to probe the vibrational properties of new halides for photovoltaic application.
- 5) **Andrea Di Cicco and Y. Mijiti.** University of Camerino. e-mail: andrea.dicicco@unicam.it.
Active collaboration for data analysis using the software *GnXAS* in X-ray absorption based-datasets, mainly in case of amorphous compounds.
- 6) **José Luis Martínez.** ICMM-Madrid. e-mail: martinez@icmm.csic.es.
Active collaboration for different magnetic measurements under pressure and varying temperatures using state-of-art SQUIDs and PPMS.
- 7) **Paulo Sérgio Pizani.** DF-UFSCar, Brazil, e-mail: pizani@df.ufscar.br.
Active collaboration for Raman spectroscopy investigations under pressure or low-temperatures in perovskites and ilmenites compounds, case of spin-phonon coupling and structural phase transitions.
- 8) **Antonio Carlos Hernandes.** IFSC-USP, Brazil. e-mail: hernandes@ifsc.usp.br.
Active collaboration for advanced ceramics preparations, microanalysis, and impedance spectroscopy at different temperatures.
- 9) **Mateus Ferrer and Julio Sambrano.** Federal University of Pelotas and Universidade Estadual Paulista-Bauru, Brazil. e-mail: mateusmferrer@gmail.com and sambrano@fc.unesp.br.
Active collaboration for DFT-based calculations in energy materials, aiming to extract their optimized crystal structure, lattice dynamics, optical and dielectric properties.
- 10) **Aída Serrano and Jesús L-Sanchez.** ICV-Madrid. e-mail: aida.serrano@icv.csic.es.
Active collaboration thin-films preparation and sol-gel based-powders. We also collaborate for Raman microscopy measurements using confocal conditions in different compounds.

Grants:

- 1) **CNPq-Brazil.** 432242/2018-0. Financial support to install a PC-cluster and to buy software licenses for a new laboratory at the Federal University of Pelotas as led by Prof. Mateus Ferrer.
- 2) **Spanish Ministry of Science, Innovation, and Universities.** Number not assigned yet. Four years project on the topic of energy materials, covering thermoelectrics, fuel cells, and photovoltaic materials, as led by Dr. José Antonio Alonso.

References:

- 1) **José António Alonso.** ICMM-Madrid. e-mail: ja.alonso@icmm.csic.es.
- 2) **Carlos Pecharromán.** ICMM-Madrid. e-mail: cpg@icmm.csic.es.
- 3) **Antonio Carlos Hernandes.** IFSC-USP, Brazil. e-mail: hernandes@ifsc.usp.br.
- 4) **Paulo Sérgio Pizani.** DF-UFSCar, Brazil. e-mail: pizani@df.ufscar.br.
- 5) **Olivier Mathon/Angelika Rosa.** BM23/ID24 ESRF. e-mail: mathon@esrf.fr/angelika.rosa@esrf.fr.

Published articles:

[2023]

50. **RODRIGUES, JOÃO ELIAS F. S.**; GAINZA, JAVIER; SERRANO-SÁNCHEZ, FEDERICO; NEMES, NORBERT M.; DURA, OSCAR J.; MARTÍNEZ, JOSE LUIS; ALONSO, JOSE ANTONIO. A novel crystallographic location of rattling atoms in filled $\text{Eu}_x\text{Co}_4\text{Sb}_{12}$ skutterudites prepared under high-pressure conditions. *Zeitschrift fur Kristallographie-Crystalline Materials*, v. 238, p. 47-56, 2023.

49. GAINZA, JAVIER; SERRANO-SÁNCHEZ, FEDERICO; **RODRIGUES, JOÃO E. F. S.**; DURA, OSCAR J.; FRAGOSO, BRENDA; FERRER, MATEUS M.; NEMES, NORBERT M.; MARTÍNEZ, JOSÉ L.; FERNÁNDEZ-DÍAZ, MARÍA T.; ALONSO, JOSÉ A. Structural Evolution from Neutron Powder Diffraction of Nanostructured SnTe Obtained by Arc Melting. *Crystals*, v. 13, p. 49, 2023.

48. **RODRIGUES, JOÃO E. F. S.**; GAINZA, JAVIER; SERRANO-SÁNCHEZ, FEDERICO; SILVA, ROMUALDO S.; DEJOIE, CATHERINE; NEMES, NORBERT M.; DURA, OSCAR J.; MARTÍNEZ, JOSÉ L.; ALONSO, JOSÉ ANTONIO. Thermal Expansion and Rattling Behavior of Gd-Filled $\text{Co}_4\text{Sb}_{12}$ Skutterudite Determined by High-Resolution Synchrotron X-ray Diffraction. *Materials*, v. 16, p. 370, 2023.

47. **RODRIGUES, J. E.**; ROSA, A. D.; LÓPEZ-SÁNCHEZ, J.; SEBASTIANI-TOFANO, E.; NEMES, N. M.; MARTÍNEZ, J. L.; ALONSO, J. A.; MATHON, O. EXAFS evidence for the spin-phonon coupling in the monoclinic PrNiO_3 nickelate perovskite. *Journal of Materials Chemistry C*, v. 11, p. 462-471, 2023.

[2022]

46. SILVA JR, R. S.; GAINZA, J.; **RODRIGUES, J. E.**; MARTÍNEZ, L.; CÉSPEDES, E.; NEMES, N. M.; MARTÍNEZ, J. L.; ALONSO, J. A. High-pressure synthesis, spin-glass behaviour, and magnetocaloric effects in FexTi_2S_4 heideite sulphides. *Journal of Materials Chemistry C*, v. 10, p. 15929-15940, 2022.

45. ERSU, GULSUM; MUNUERA, CARMEN; MOMPEAN, FEDERICO J.; VAQUERO, DANIEL; QUEREDA, JORGE; **RODRIGUES, JOÃO ELIAS F. S.**; ALONSO, JOSE A.; FLORES, EDUARDO; ARES, JOSE R.; FERRER, ISABEL J.; ALENIZI, ABDULLAH M.; NAFADY, AYMAN; KURIAKOSE, SRUTHI; ISLAND, JOSHUA O.; CASTELLANOS GOMEZ, ANDRES. Low-cost and biodegradable thermoelectric devices based on van der Waals semiconductors on paper substrates. *Energy & Environmental Materials*, 2022.

44. **RODRIGUES, JOÃO ELIAS F. S.**; GAINZA, JAVIER; SERRANO-SÁNCHEZ, FEDERICO; MARINI, CARLO; HUTTEL, YVES; NEMES, NORBERT M.; MARTÍNEZ, JOSÉ LUIS; ALONSO, JOSÉ ANTONIO. Atomic Structure and Lattice Dynamics of CoSb_3 Skutterudite-Based Thermoelectrics. *CHEMISTRY OF MATERIALS*, v. 34, p. 1213-1224, 2022.

43. **RODRIGUES, João Elias**; COSTA, Renilton; PIZANI, Paulo; HERNANDES, A. C.; ALONSO, J.A. Combining Raman spectroscopy and synchrotron X-ray diffraction to unveil the order-types in $\text{A}_3\text{CaNb}_2\text{O}_9$ (A = Ba, Sr) complex perovskites. *Journal of Raman Spectroscopy*, v. April, p. 1-9, 2022.

42. ABIA, CARMEN; LÓPEZ, CARLOS A.; GAINZA, JAVIER; **RODRIGUES, JOÃO ELIAS F. S.**; FERRER, MATEUS M.; DALENOGARE, GUSTAVO; NEMES, NORBERT M.; DURA, OSCAR J.; MARTÍNEZ, JOSÉ L.; FERNÁNDEZ-DÍAZ, MARÍA T.; ÁLVAREZ-GALVÁN, CONSUELO; ALONSO, JOSÉ A. Detailed Structural Features of the Perovskite-Related Halide RbPbI_3 for Solar Cell Applications. *INORGANIC CHEMISTRY*, v. 61, p. 5502-5511, 2022.

41. ABIA, CARMEN; LÓPEZ, CARLOS ALBERTO; GAINZA, JAVIER; **RODRIGUES, JOÃO ELIAS FIGUEIREDO SOARES**; FERRER, MATEUS M.; NEMES, NORBERT; DURA, OSCAR J.; MARTINEZ, JOSE L.; FERNANDEZ-DIAZ, MARIA TERESA; ALVAREZ-GALVAN, M. CONSUELO; NÉMETH, GERGELY; KAMARAS, KATALIN; FAUTH, FRANCOIS; ALONSO, JOSE ANTONIO. Structural evolution, optical gap, and thermoelectric properties of RbPb_2Br_5 layered halide, prepared by mechanochemistry. *Journal of Materials Chemistry C*, v. 10, p. 6857-6865, 2022.

40. NASCIMENTO, Rodney; **RODRIGUES, João Elias**; FAVARINE, Bruno; RAMOSE, Ana; Ciancaglinie, Pietro; PECHARROMAN, Carlos; Rahouadjf, Rachid; HERNANDES, Antônio Carlos; Bechtold, Ivan. Thermal annealing of natural rubber films controls wettability and enhances cell proliferation. *Applied Surface Science*, v. 31, p. 102048, 2022.

[2021]

39. MIJITI, YIMIN; CHEN, KAI; **RODRIGUES, JOÃO ELIAS F. S.**; HU, ZHIWEI; NATAF, LUCIE; TRAPANANTI, ANGELA; DI CICCIO, ANDREA; BAUDELET, FRANCOIS. Crystal and electronic structure of Co_3O_4 spinel under pressure probed by XANES and Raman spectroscopy. *PHYSICAL REVIEW B*, v. 103, p. 024105, 2021.

38. ZHANG, WENLIANG; ZHAO, QINGHUA; MUNUERA, CARMEN; LEE, MARTIN; FLORES, EDUARDO; **RODRIGUES, JOÃO E. F.**; ARES, JOSE R.; SANCHEZ, CARLOS; GAINZA, JAVIER; VAN DER ZANT, HERRE S. J. ; ALONSO, JOSÉ A.; FERRER, ISABEL J.; WANG, TAO; FRISENDA, RICCARDO; CASTELLANOS-GOMEZ, ANDRES . Integrating van der Waals materials on paper substrates for electrical and optical applications. *Applied Materials Today*, v. 23, p. 101012, 2021.

37. GAINZA, JAVIER; SERRANO-SÁNCHEZ, FEDERICO; **RODRIGUES, JOÃO ELIAS F. S.**; NEMES, NORBERT MARCEL; MARTÍNEZ, JOSÉ LUIS; ALONSO, JOSÉ ANTONIO. Metastable Materials Accessed under Moderate Pressure Conditions ($P \leq 3.5$ GPa) in a Piston-Cylinder Press. *Materials*, v. 14, p. 1946, 2021.

36. DO NASCIMENTO, RODNEY MARCELO; SCHMITT, JEAN-FRANÇOIS; SARIG, UDI; **RODRIGUES, JOÃO ELIAS FIGUEIREDO SOARES**; PECHARROMÁN, CARLOS; RAMOS, ANA PAULA; CIANCAGLINI, PIETRO; FAITA, FABRICIO LUIZ; RAHOUADJ, RACHID; HERNANDES, ANTÔNIO CARLOS; BECHTOLD, IVAN HELMUTH. Surface Wettability of a Natural Rubber Composite under Stretching: A Model to Predict Cell Survival. *LANGMUIR*, v. 37, p. 4639-4646, 2021.

35. **RODRIGUES, JOÃO ELIAS F. S.**; GAINZA, JAVIER; SERRANO-SÁNCHEZ, FEDERICO; FERRER, MATEUS M.; FABRIS, GUILHERME S. L.; SAMBRANO, JULIO R.; NEMES, NORBERT M.; MARTÍNEZ, JOSÉ L.; POPESCU, CATALIN; ALONSO, JOSÉ A.. Unveiling the Structural Behavior under Pressure of Filled $\text{M}_x\text{Co}_4\text{Sb}_{12}$ ($M = \text{K}, \text{Sr}, \text{La}, \text{Ce}, \text{and Yb}$) Thermoelectric Skutterudites. *INORGANIC CHEMISTRY*, v. 60, p. 7413-7421, 2021.

34. RUEDA-P, JORGE-ENRIQUE; **RODRIGUES, J.E.F.S.**; HERNANDES, ANTONIO CARLOS. Monocrystalline fiber growth technique: New critical radius considerations. *JOURNAL OF CRYSTAL GROWTH*, v. 570, p. 126199, 2021.

33. DEWAELE, AGNÈS; ROSA, ANGELIKA D.; GUIGNOT, NICOLAS; ANDRAULT, DENIS; RODRIGUES, JOÃO ELIAS F. S.; GARBARINO, GASTON. Stability and equation of state of face-centered cubic and hexagonal close packed phases of argon under pressure. *Scientific Reports*, v. 11, p. 15192, 2021.

32. MAYER, S. F.; **RODRIGUES, J. E.**; SOBRADOS, I.; GAINZA, J. ; FERNÁNDEZ-DÍAZ, M. T.; MARINI, C.; ASENSIO, M. C. ; ALONSO, J. A. . Synergy of diffraction and spectroscopic techniques to unveil the crystal structure of antimonic acid. *Scientific Reports*, v. 11, p. 17763, 2021.

31. **RODRIGUES, JOÃO ELIAS F. S.**; ESCANHOELA, CARLOS A.; FRAGOSO, BRENDA; SOMBRIO, GUILHERME; FERRER, MATEUS M.; ÁLVAREZ-GALVÁN, CONSUELO; FERNÁNDEZ-DÍAZ, MARIA TERESA; SOUZA, JOSE A.; FERREIRA, FABIO F.; PECHARROMÁN, CARLOS; ALONSO, JOSÉ ANTONIO. Experimental and Theoretical Investigations on the Structural, Electronic, and Vibrational Properties of $\text{Cs}_2\text{AgSbCl}_6$ Double Perovskite. *INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH*, v. 60, p. 18918-18928, 2021.

[2020]

30. **RODRIGUES, JOÃO E.F.S.**; FERRER, MATEUS M.; MOREIRA, MARIO L.; SAMBRANO, JULIO R.; COSTA, RENILTON C.; RODRIGUES, ARIANO D.; PIZANI, PAULO S.; HUTTEL, Y.; ALONSO, JOSÉ A.; PECHARROMÁN, CARLOS. Unveiling the infrared complex dielectric function of ilmenite CdTiO_3 . *JOURNAL OF ALLOYS AND COMPOUNDS*, v. 813, p. 152136, 2020.

29. LÓPEZ, CARLOS A.; ABIA, CARMEN; **RODRIGUES, JOAO E.**; SERRANO-SÁNCHEZ, FEDERICO; NEMES, NORBERT M.; MARTÍNEZ, JOSÉ L.; FERNANDEZ-DÍAZ, MARÍA T.; BISKUP, NEVEN; ALVAREZ-GALVÁN, CONSUELO; CARRASCOSO, FELIX; CASTELLANOS-GOMEZ, ANDRES; ALONSO, JOSÉ A. Enhanced stability in $\text{CH}_3\text{NH}_3\text{PbI}_3$ hybrid perovskite from mechano-chemical synthesis: structural, microstructural and optoelectronic characterization. *Scientific Reports*, v. 10, p. 11228, 2020.

28. GAINZA, JAVIER; SERRANO-SÁNCHEZ, FEDERICO; **RODRIGUES, JOÃO E.**; PRADO-GONJAL,

JESÚS; NEMES, NORBERT M.; BISKUP, NEVEN; DURA, OSCAR J.; MARTÍNEZ, JOSÉ L.; FAUTH, FRANÇOIS; ALONSO, JOSÉ A. Unveiling the Correlation between the Crystalline Structure of M-Filled CoSb₃ (M = Y, K, Sr) Skutterudites and Their Thermoelectric Transport Properties. *ADVANCED FUNCTIONAL MATERIALS*, v. 3, p. 2001651, 2020.

27. FERRER, MATEUS M.; SAMBRANO, JULIO R.; HERNANDES, ANTONIO C.; **RODRIGUES, JOÃO E. F. S.** Optical phonon modes in 1:2 ordered trigonal Ba₃MgNb₂O₉ perovskite: Synergy of both classical and quantum methods. *JOURNAL OF RAMAN SPECTROSCOPY*, v. 51, p. 1219-1229, 2020.

26. MAYER, S. F. ; **RODRIGUES, J. E.** ; MARINI, C. ; FERNÁNDEZ-DÍAZ, M. T. ; FALCÓN, H. ; ASENSIO, M. C. ; ALONSO, J. A. . A comprehensive examination of the local- and long-range structure of Sb₆O₁₃ pyrochlore oxide. *Scientific Reports*, v. 10, p. 16956, 2020.

25. **RODRIGUES, JOÃO ELIAS F. S.**; GAINZA, JAVIER ; SERRANO-SÁNCHEZ, FEDERICO ; LÓPEZ, CARLOS ; DURA, OSCAR J. ; NEMES, NORBERT ; MARTINEZ, JOSE L. ; HUTTEL, YVES ; FAUTH, FRANCOIS ; FERNÁNDEZ-DIAZ, MARIA TERESA ; BISKUP, NEVENKO ; ALONSO, JOSÉ ANTONIO . Structural Features, Anisotropic Thermal Expansion, and Thermoelectric Performance in Bulk Black Phosphorus Synthesized under High Pressure. *INORGANIC CHEMISTRY*, v. 59, p. 14932-14943, 2020.

24. GAINZA, JAVIER ; SERRANO-SÁNCHEZ, FEDERICO ; **RODRIGUES, JOÃO E.F.S.** ; HUTTEL, YVES ; DURA, OSCAR J. ; KOZA, MICHAEL M. ; FERNÁNDEZ-DÍAZ, MARÍA TERESA ; MELÉNDEZ, JUAN J. ; MÁRKUS, BENCE G. ; SIMON, FERENC ; MARTÍNEZ, JOSÉ LUIS ; ALONSO, JOSÉ ANTONIO ; NEMES, NORBERT M. . High-Performance n-type SnSe Thermoelectric Polycrystal Prepared by Arc-Melting. *Cell Reports Physical Science*, v. 1, p. 100263, 2020.

[2019]

23. **RODRIGUES, JOÃO E.F.S.**; ROSA, WASHINGTON S. ; FERRER, MATEUS M. ; CUNHA, THIAGO R. ; MORENO ZAPATA, MAXIMILIANO JESÚS ; SAMBRANO, JULIO R. ; MARTÍNEZ, JOSÉ L. ; PIZANI, PAULO S. ; ALONSO, JOSÉ A. ; HERNANDES, ANTONIO C. ; GONÇALVES, RENATO V. . Spin-phonon coupling in uniaxial anisotropic spin-glass based on Fe₂TiO₅ pseudobrookite. *JOURNAL OF ALLOYS AND COMPOUNDS*, v. 799, p. 563-572, 2019.

22. DE OLIVEIRA, RAFAEL B. ; ANDREETA, MARCELLO R. B. ; DE SOUZA, DULCINA M. P. F. ; **RODRIGUES, JOÃO E. F. S.** ; PIZANI, PAULO S. . Innovative Design for the Enhancement of Lithium Lanthanum Titanate Electrolytes. *Crystal Growth & Design*, v. 19, p. 4897-4901, 2019.

21. NOGUEIRA, ADAILTON CHIMENES ; GOMES, LUIZ EDUARDO ; FERENCZ, JULIO A.P. ; **RODRIGUES, JOAO ELIAS F. S.** ; GONÇALVES, RENATO V. ; WENDER, HEBERTON . Improved Visible-Light Photoactivity of CuBi₂O₄/CuO Heterojunctions for Photodegradation of Methylene Blue and Metronidazole. *Journal of Physical Chemistry C*, v. 123, p. 25680-25690, 2019.

20. SERRANO-SÁNCHEZ, F. ; CONESA, J.C. ; **RODRIGUES, J.E.** ; MARINI, C. ; MARTÍNEZ, J.L. ; ALONSO, J.A. . Divalent chromium in the octahedral positions of the novel hybrid perovskites CH₃NH₃Pb_{1-x}Cr(Br,CI)₃ (x = 0.25, 0.5): Induction of narrow bands inside the bandgap. *JOURNAL OF ALLOYS AND COMPOUNDS*, v. 821, p. 153414, 2019.

[2018]

19. FERRER, MATEUS M. ; RODRIGUES, JOÃO ELIAS F.S. ; ALMEIDA, MARCIO A.P. ; MOURA, FRANCISCO ; LONGO, ELSON ; PIZANI, PAULO S. ; SAMBRANO, JULIO R. . Theoretical methods for calculations of optical phonons in BiOBr: Analysis and correction of propagated errors. *JOURNAL OF RAMAN SPECTROSCOPY*, v. 49, p. 1356-1363, 2018.

18. CUNHA, T.R. ; RODRIGUES, A.D. ; **RODRIGUES, J.E.** ; DA COSTA, R.C. ; TOLEDO, T.A. ; PIZANI, P.S. . Combining XRD and Raman spectroscopy techniques to probe the solid solution and composite forms of Pb_{1-x}CoxTiO₃ systems. *MATERIALS RESEARCH BULLETIN*, v. 107, p. 462-467, 2018.

17. DA COSTA, R.C. ; **RODRIGUES, J.E.** ; GUALDI, A.J. ; CUNHA, T.R. ; RODRIGUES, A.D. ; MARQUES, P.W. ; HERNANDES, A.C. ; PIZANI, P.S. . Dielectric and Magnetic Properties of Ni_xPb_{1-x}TiO₃ Solid Solution and Composite: Coexistence of Ferroelectric and Antiferromagnetic Order. *JOURNAL OF ALLOYS AND COMPOUNDS*, v. 739, p. 600-606, 2018.

16. **FIGUEIREDO SOARES RODRIGUES, JOÃO ELIAS**; FERRER, MATEUS M ; CUNHA, THIAGO R ; COSTA, RENILTON C ; SAMBRANO, J R ; RODRIGUES, ARIANO DE GIOVANNI ; PIZANI, P S . First-principles calculations and Raman scattering evidences for local symmetry lowering in rhombohedral ilmenite: temperature- and pressure-dependent studies. JOURNAL OF PHYSICS-CONDENSED MATTER, v. 30, p. 485401, 2018.

15. DO NASCIMENTO, RODNEY MARCELO ; DE PAULA, AMAURI JARDIM ; OLIVEIRA, NAIARA CIPRIANO ; ALVES, ANA CECILIA ; DE OLIVEIRA AQUINO, YASMINE MARIA LIMA ; FILHO, ANTÔNIO GOMES SOUZA ; **RODRIGUES, JOÃO ELIAS FIGUEIREDO SOARES** ; HERNANDES, ANTÔNIO CARLOS . Towards the production of natural rubber-calcium phosphate hybrid for applications as bioactive coatings. Materials Science & Engineering C-Materials for Biological Applications, v. 94, p. 417-425, 2018.

14. **RODRIGUES, J.E.**; BEZERRA, D.M. ; HERNANDES, A.C. . Calculation of the optical phonons in ordered Ba₂MgWO₆ perovskite using short-range force field model. JOURNAL OF RAMAN SPECTROSCOPY, v. 49, p. 1822-1829, 2018.

13. DA SILVA, LUÍS F. ; AVANSI, WALDIR ; CATTO, ARIADNE C. ; **RODRIGUES, JOÃO E. F. S.** ; BERNARDI, MARIA I. B. ; MASTELARO, VALMOR R. . The Role of Nb Addition in TiO₂ Nanoparticles: Phase Transition and Photocatalytic Properties. PHYSICA STATUS SOLIDI A-APPLICATIONS AND MATERIALS SCIENCE, v. 215, p. 1800321, 2018.

12. CUNHA, T.R. ; RODRIGUES, A.D. ; **RODRIGUES, J.E.** ; SAMPAIO, D.V. ; MOULTON, B.J.A. ; DA COSTA, R.C. ; PIZANI, P.S. . Thermal expansion, compressibility and bulk modulus of ilmenite-type CoTiO₃: X-ray diffraction at high pressures and temperatures. SOLID STATE SCIENCES, v. 88, p. 1-5, 2018.

11. FRANCISCO, L.H. ; **RODRIGUES, J.E.** ; CORRER, W.R. ; HERNANDES, A.C. . Blocking effect in promising proton conductors based on Ba₃Ca_{1.18}Nb_{1.82-x}R_xO_{9-δ} (R = Y³⁺, Gd³⁺, Sm³⁺, Nd³⁺) ordered perovskites for PC-SOFCs. CERAMICS INTERNATIONAL, v. 44, p. 10806-10812, 2018.

[2017]

10. **RODRIGUES, J.E.**; BEZERRA, D.M.; HERNANDES, A.C. Ordering effect on the electrical properties of stoichiometric Ba₃CaNb₂O₉-based perovskite ceramics. CERAMICS INTERNATIONAL, v. 43, p. 14015-14022, 2017.

9. BEZERRA, DÉBORA M.; **RODRIGUES, JOÃO E.F.S.**; ASSAF, ELISABETE M. Structural, vibrational and morphological properties of layered double hydroxides containing Ni²⁺, Zn²⁺, Al³⁺ and Zr⁴⁺ cations. MATERIALS CHARACTERIZATION, v. 125, p. 29-36, 2017.

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