

Soltani Mohamed Toufik, PhD

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Education

Thesis

Research Experience

- Sep 1994 – Jul 2016* **Professor(full)**
Université de Biskra, Department of Physics
Biskra, Algeria
Process for purification and sintering of MgO extracted from local dolomite.
Elaboration and characterization of antimony oxide based glasses.
- Jan 1994 – Jul 2016* **Professor(full)**
Université de Biskra, Department of Material Sciences
Biskra, Algeria

Statistics

RG Score 23.38
Publications 52
Reads 5,751
Citations 199

Awards & Grants

Skills & Activities

Skills Material Characteristics, Oxide Glasses, Advanced Materials, Vibrational Spectroscopy, Glass Ceramics, Glass Chemistry, Glass Transition, Glass, Condensed Matter Physics, Glass Science and Technology, Materials, Material Characterization, Thermal Analysis, X-ray Diffraction, Differential Thermal Analysis, DTA, DSC, Nanomaterials, Dilatometry, Mechanical Properties, SEM Analysis, Differential Scanning Calorimetry, XRD Analysis, Materials Processing, Ceramics, Ceramic Materials, Silicate, Sintering, Ceramic Processing, Materials Testing, Microstructure, Advanced Ceramics, Absorption, Emission, PLS, Neural Modeling, Neural Networks, Ultrasonics, Artificial Neural

Networks, Metal Oxides, Oxides

Languages Arabic, English, French

Scientific Memberships Algerian society of optics and photonics.
Micro and Nano-technology Photonics Network Nour21 Algeria.

Interests

Publication Highlights

[authors]: [title]. [details]

Books

Book Chapters

Journal Publications

M. Çelikbilek Ersundu, A.E. Ersundu, M.T. Soltani, M. Baazouzi: *Crystallization kinetics of new heavy metal oxide glasses within the Sb₂O₃-Na₂O-WO₃-PbO system*. *Ceramics International* 09/2016;, DOI:10.1016/j.ceramint.2016.09.184

O. Bošák, S. Minárik, V. Labaš, Z. Ančíková, P. Košťál, O. Zimný, M. Kubliha, M. Poulain, M.T. Soltani: *Artificial neural network analysis of optical measurements of glasses based on Sb₂O₃*. *Journal of Optoelectronics and Advanced Materials* 04/2016; 18(3):240-247.

M Kubliha, M T Soltani, V Trnovcová, M Legouera, V Labaš, P Kostka, D Le Coq, M Hamzaoui: *Journal of Non-Crystalline Solids*. *Journal of Non-Crystalline Solids* 11/2015; 428:42-48., DOI:10.1016/j.jnoncrysol.2015.07.021

B Tioua, MT Soltani, M Hamzaoui, M Baazouzi: *New Erbium Doped Antimony Glasses for Laser and Glass Amplification*. 09/2015; 4(1):1., DOI:10.4314/jfas.v4i1.1

P Petkova, P Vasilev, M Mustafa, I Parushev, M.T. Soltani: *Near-infrared dispersion and spin-orbit interaction of Co doped (80 - X)Sb₂O₃-20Na₂O-xWO₃ glasses*. *Spectrochimica Acta Part A Molecular and Biomolecular Spectroscopy* 07/2015; 152:475-479., DOI:10.1016/j.saa.2015.07.085

M. Kubliha, M. T. Soltani, V. Trnovcová, M. Legouera, V. Labaš, P. Kostka, D. Le Coq, M Hamzaoui: *Electrical, dielectric, and optical properties of Sb₂O₃-Li₂O-MoO₃ glasses*.

Ali Erçin Ersundu, Miray Çelikbilek, Mohamed Baazouzi, M. T. Soltani, Johann Troles, Süheyla Aydin: *Characterization of New Sb₂O₃-Based Multicomponent Heavy Metal Oxide Glasses*. *Journal of Alloys and Compounds* 12/2014; 615:712-718., DOI:10.1016/j.jallcom.2014.07.024

J. Zavadil, Z.G. Ivanova, P. Kostka, M. Hamzaoui, M.T. Soltani: *Photoluminescence study of Er-doped zinc-sodium-antimonite glasses*. *Journal of Alloys and Compounds* 10/2014;, DOI:10.1016/j.jallcom.2014.05.102

- P. Petkova, A. Ghamri, P. Vasilev, I. Ismailov, M. T. Soltani: *Visible absorption structure of chromium doped (80-x) Sb₂O₃-20K(2)O-xPbO glasses*. *Physica Scripta* 09/2014; T162(T162)., DOI:10.1088/0031-8949/2014/T162/014028
- K. Ouannes, Mohamed Toufik Soltani, Marcel Poulain, Georges Boulon, G. Alombert-Goget, Yannick Guyot, A. Pillonnet, K. Lebbou: *Spectroscopic Properties Of Er³⁺-Doped Antimony Oxide Glass*. *Journal of Alloys and Compounds* 08/2014; 603,:132-135., DOI:10.1016/j.jallcom.2014.02.008
- Mohamed Baazouzi, M.T. Soltani, Majda Hamzaoui, Marcel Poulain, Johann Troles: *Optical properties of alkali-antimonite glasses and purified processes for fiber drawing*. *Optical Materials* 12/2013; 36(2):500-504., DOI:10.1016/j.optmat.2013.10.017
- P Petkova, S Houhou, M T Soltani: *Optical absorption and emission of Ni-doped (80- x)Sb₂ O₃ -20K₂ O- x MoO₃ glasses*. *Physica Scripta* 11/2013; T157:014042., DOI:10.1088/0031-8949/2013/T157/014042
- M. Hamzaoui, S. Azri, M. T. Soltani, R. Lebullenger, M. Poulain: *Thermal and elastic characterization of Sb₂O₃-Na₂O-ZnO glasses*. 11/2013; T157(T157):4029-., DOI:10.1088/0031-8949/2013/T157/014029
- P. Petkova, H. Touiri, M. T. Soltani: *Investigation of Urbach's rule region in undoped and Cu doped (80 - X)Sb₂O₃-20Li₂O-xMoO₃ glasses*. *Physica Scripta* 11/2013;, DOI:10.1088/0031-8949/2013/T157/014041
- M. Hamzaoui, S. Azri, M.T.Soltani, R.Lebullenger, M. Poulain: *Thermal and elastics characterization of Sb₂O₃-Na₂O-ZnO glasses*. *Physica Scripta* 11/2013;
- P. Petkova, S. Houhou, M. T. Soltani: *Optical absorption and emission of Ni-doped (80-x)Sb₂O₃-20K₂O-xMoO₃ glasses*. *Physica Scripta* 10/2013;
- P. Petkova, H. Touiri, M. T. Soltani: *Investigation of Urbach's rule region in undoped and Cu doped (80-x)Sb₂O₃-20Li₂O-xMoO₃ glasses*. *Physica Scripta* 10/2013;
- M.T. Soltani, M. Hamzaoui, S. Houhou, H. Touiri, L. Bediar, A.M. Ghemri, P. Petkova: *Physical Characterization of Sb₂ O₃ -M₂ O-MoO₃ (M~ Li,~K) New Glasses*. *Acta Physica Polonica Series a* 02/2013; 123(2):227-229., DOI:10.12693/APhysPolA.123.227
- M. T. Soltani, M. Hamzaoui, S. Houhou, H. Touiri, L. Bediar, A. M. Ghemri, P. Petkova: *Physical Characterization of Sb₂O₃-M₂O-MoO₃ (M = Li, K) New Glasses*. *Acta Physica Polonica Series a* 02/2013; 123(2):227.
- P. Petkova, H. Touiri, M.T. Soltani: *Spectroscopic Properties of Cu Doped (80-x)Sb₂O₃-20Li₂O-xMoO₃ Glasses*. *Acta Physica Polonica Series a* 02/2013; 123(2):205., DOI:10.12693/APhysPolA.123.205
- Majda Hamzaoui, M. T. Soltani, Mohamed Baazouzi, B. Tioua, Z. G. Ivanova, Ronan Lebullenger, Marcel Poulain, J. Zavadil: *Optical properties of erbium doped antimony based glasses: Promising visible and infrared amplifiers materials*. *physica status solidi (b)* 11/2012;, DOI:10.1002/pssb.201248271
- E. A. Ghezal,, H. Li,, A. Nehari,, G. Alombert-Goget,, A. Brenier,, K. Lebbou,, M. F. Joubert ,, M.T. Soltani: *Effect of Pulling Rate on Bubbles Distribution in Sapphire Crystals Grown by the Micropulling Down (??-PD) Technique*. *Crystal Growth & Design* 08/2012; 12(08):4098-4103., DOI:10.1021/cg300589h
- P Petkova, M T Soltani, S Petkov, J Tacheva, V Nedkov: *Visible and far-infrared spectroscopic studies of Co-doped (80-x)Sb₂O₃-20Na₂O-xWO₃ glasses*. *Physica Scripta* 04/2012; T149(T149):014057., DOI:10.1088/0031-8949/2012/T149/014057

- P. Petkova, M. Soltani, S. Petkov, V. Nedkov: *Optical properties of Co doped (80-x)Sb₂O₃-20Na₂O-xWO₃ (x% mol of WO₃) glasses.*
- P. Petkova, M.T. Soltani, S. Petkov and V. Nedkov: *Urbach's Rule in Undoped and Co-Doped (80-x)Sb₂O₃-20Na₂O-xWO₃ Glasses.* Acta Physica Polonica Series a 01/2012; 121:152.
- B. Tioua, M.T. Soltani, M. Hamzaoui and M. Baazouzi: *New erbium doped glasses for lasers and glass amplification.*
- Petya Petkova, Mohamed Toufik Soltani, Stanislav Petkov, Vesselin Nedkov: *OPTICAL PROPERTIES OF Co DOPED (80 - x)Sb₂O₃-20Na₂O-xWO₃ (x% mol of WO₃) GLASSES.* Comptes rendus de l'Académie bulgare des sciences: sciences mathématiques et naturelles 01/2012; 65(6):759-764.
- M.T. Soltani, M. Hamzaoui, M. Baazouzi, L. Charef-khodja, A. Zekri, M. Poulain: *Role of cadmium and zinc oxides in the physico-chemical properties of glasses based on antimony.*
- M.T. Soltani, T. Djouama, A. Boutarfaia, Marcel Poulain: *New heavy metal oxide glasses based on Sb₂O₃.* Journal of Optoelectronics and Advanced Materials 01/2009;
- T. Djouama, Marcel Poulain, M. T. Soltani, A. Boutarfaia: *Physical properties and magnetic susceptibility studies of fluorophosphate glasses based on manganese.*
- M. T. SOLTANI, T. DJOUAMA, A. BOUTARFAIA, M. POULAIN: *New heavy metal oxide glasses based on Sb₂O₃.*
- R. MAKHLOUFI, M.T. SOLTANI, A.BOUTARFAIA and M. POULAIN: *L'état vitreux dans le système ternaire : Sb₂S₃ - Sb₂O₃ - NaPO₃. Synthèse et Caractérisation.*
- M.T Soltani, A Boutarfaia, R Makhloufi, M Poulain: *New Alkali Antimonite Glasses.* Journal of Physics and Chemistry of Solids 12/2003; 64(12):2307-2312., DOI:10.1016/S0022-3697(03)00220-8
- J. Kaluzny, M. Poulain, M. Kubliha, V. Adamcik, M. Legouera, M.T. Soltani, E. Mariana: *Electrical, dielectrical and optical properties of glasses based on Sb₂O₃.*
- S. Achour, M. T. Soltani, A. Harabi: *Preparation process of pure magnesia from local dolomite..* Advances in Science and Technology 01/1999; B101, B109.
- S. Achour, M. T. Soltani, A Harabi: *A process for morphology changing of MgO particles.*
- S. Achour, MT Soltani, A. Harabi: *Preparation process of pure magnesia from local dolomite.* Advances in Science and Technology 01/1999; 13, 14, 15, 16, 17:B101-B108.
- M.T. Soltani, S. Achour, A. Harabi: *Etude du frittage de l'oxyde de magnésium extrait de la dolomie locale.*
- M. T. SOLTANI, A. BOUTARFAIA, S. ACHOUR, A. HARABI: *ELABORATION DU REFRACTAIRE DE L'OXYDE DE MAGNESIUM DE HAUTE PURETE EXTRAIT DE LA DOLOMIE.*

Patents

Conference Proceedings

- P. Petkova, K. Boubaker, P. Vasilev, M. Mustafa, A. Yumak, H. Touihri, M. T. Soltani: *Infrared spectroscopy of undoped and Cu-doped (80-x)Sb₂O₃-20Li₂O-xMoO₃ glasses*. REVIEW OF PROGRESS IN QUANTITATIVE NONDESTRUCTIVE EVALUATION: Proceedings of the 35th Annual Review of Progress in Quantitative Nondestructive Evaluation; 04/2016, DOI:10.1063/1.4945972
- Zora Jancikova, Bosak Ondrej, Zimny Ondrej, Legouera Messaoud, Minarik Stanislav, Kostial Pavel, Poulain Marcel, Soltani Mohamed Toufik: *The neural network analysis of optical glasses transmittance*. In Control Conference (ICCC), 2014 15th International Carpathian (pp. 196-200). IEEE, Velke Karlovice, Czech Republic; 05/2014, DOI:10.1109/CarpathianCC.2014.6843596
- M. T. Soltani, M. Hamzaoui, R. Lebullenger: *JUDD-OFELT ANALYSIS AND PHOTOLUMINESCENCE OF NEW ERBIUM DOPED ANTIMONY BASED GLASSES*. International Conference on Advanced Materials for photonics, Sensing and Energy conversion AMPSECA 2012; 12/2012
- M. T. Soltani, H. Guezoun, L. Guerbous, P. Petkova: *THERMAL STUDIES AND LUMINESCENCE OF COBALT DOPED (80-x)Sb₂O₃-20Na₂O-xWO₃ GLASSES*. The 3rd International Conference on the Physics of Optical Materials and Devices, ICOM2012, Belgrade, Serbia; 09/2012
- M. T. Soltani, L. Bediar, B.Tioua, M. Hamzaoui: *Spectroscopic properties of erbium doped Sb₂O₃-K₂O-PbO-ZnO*. Second international Advances in Applied Physics and Materials Science Congress, APMAS2012, Antalya, Turkey; 04/2012
- P. Petkova, S. Houhou, M.T.Soltani: *Optical investigation in UV region for undoped and Ni doped (80-x)Sb₂O₃-20K₂O-xMoO₃ glasses*. AIP Conf. Proc, 2nd International Advances in Applied Physics and Materials Science Congress; 04/2012, DOI:10.1063/1.4751568
- M. Toufik Soltani, S. Haddad, K. Ouennes, A. Boulegroun, M. Poulain: *Structural investigations of Sb₂O₃-M₂O (M=Li, Na or K) glasses by themean of thermal and elastics characterization*. AIP proceeding of the 2nd International Advances in Applied Physics and Materials Science Congress, 26-29 april, , Turkey; 04/2012, DOI:10.1063/1.4751571
- P. Petkova, M.T. Soltani, S. Petkov, V. Nedkov: *Urbach's Rule in Undoped and Co Doped (80-x)Sb₂O₃-20Na(2)O-xWO(3) Glasses*. 1st International Congress on Advances in Applied Physics and Materials; 01/2012, DOI:10.12693/APhysPolA.121.152
- Mohamed Toufik Soltani, M. Hamzaoui, M. Nouadji, M. Slimani, A. Attaf, M. Poulain: *Physical Properties of Glasses In Sb₂O₃-K₂O-PbO-MO (M=Zn or Cd)*. II Jordanian International Conference of materials science and Engineering, 4-6 Sept, Al-Balqaa University, Salt-Jordan, 2007; 09/2007
- M.T. Soltani, A. Boutarfaia, R. Makhloufi, M. Poulain: *Optical properties of alkali antimonate glasses*. 2nd International Symposium on Non-Crystalline Solids, 6th Brazilian Symposium on Glass and Related Materials, Annual Meeting of the International Commission on glass, Campos do Jordao, Brazil; 09/2003

Technical Reports