

## PUBLICATIONS

December 2020

### Book Chapters

1. *Structure and mechanical properties of boron carbide films deposited by sputtering*  
**L.G. Jacobsohn**  
**Invited chapter** to volume *Diamond and Related Materials Research* edited by Shôta Shimizu (Nova Science Publishers, 2008, New York, ISBN 978-1-60456-145-6) chapter 5, pp. 181-191

### Full Peer-Reviewed Publications

1. *Luminescence of undoped and Ce-doped hexagonal BiPO<sub>4</sub>*  
L. Pan, K. Koehler and **L.G. Jacobsohn**  
Journal of Luminescence **228**, 117626 (9 pages) (2020)  
DOI: doi.org/10.1016/j.jlumin.2020.117626
2. *Insights into the proton transport mechanism in TiO<sub>2</sub> simple oxides by in-situ Raman spectroscopy*  
J. Gao, Y. Meng, A. Benton, J. He, **L.G. Jacobsohn**, J. Tong, K. Brinkman  
ACS Applied Materials & Interfaces **12**, 38012-38018 (2020)  
DOI: doi.org/10.1021/acsami.0c08120
3. *Characterization of the optically stimulated luminescence (OSL) response of beta-irradiated alexandrite-polymer composites*  
M.C.S. Nunes, L.S. Lima, E.M. Yoshimura, L.V.S. França, O. Baffa, **L.G. Jacobsohn**, A.L.M.C. Malthez, R. Kunzel, N.M. Trindade  
Journal of Luminescence **226**, 117479 (6 pages) (2020)  
DOI: 10.1016/j.jlumin.2020.117479
4. *Luminescence of ZnS:Ag scintillator prepared by the hydrothermal reaction method: effects of reaction temperature and time, Ag concentration, and co-doping with Al*  
Y. Wu, Y. Shao and **L.G. Jacobsohn**  
Optical Materials **107**, 110015 (7 pages) (2020)  
DOI: doi.org/10.1016/j.optmat.2020.110015
5. *Scintillation, luminescence and optical properties of Ce-doped borosilicate glasses*  
L. Pan, J.K.M.F. Daguano, N.M. Trindade, M. Cerruti, E.D. Zanotto, and **L.G. Jacobsohn**  
Optical Materials **104**, 109847 (5 pages) (2020)  
DOI: 10.1016/j.optmat.2020.109847
6. *Thermoluminescence of UV-irradiated  $\alpha$ -Al<sub>2</sub>O<sub>3</sub>:C,Mg*  
N.M. Trindade, M.G. Magalhães, M.C.S. Nunes, E.M. Yoshimura, and **L.G. Jacobsohn**  
Journal of Luminescence **223**, 117195 (5 pages) (2020)  
DOI: 10.1016/j.jlumin.2020.117195

7. *Radioluminescence of  $\text{Lu}_3\text{Al}_5\text{O}_{12}:\text{Ce}$  single crystal and transparent polycrystalline ceramic at high temperatures*  
A.A. Trofimov, and **L.G. Jacobsohn**  
Ceramics International **46**, 26335-26338 (2020)  
DOI: 10.1016/j.ceramint.2019.12.247
8. *Luminescence of Ce-doped aluminophosphate glasses*  
M.W. Kielty, L. Pan, M.A. Dettmann, V. Herrig, U. Akgun, and **L.G. Jacobsohn**  
Journal of Materials Science: Materials in Electronics **30**, 16774-16780 (2019)  
DOI: 10.1007/s10854-019-01301-4
9. *A glass neutron detector with machine learning capabilities*  
G.L. Ademoski, S. Simko, M. Teeple, I. Morrow, P. Kralik, C.J. Wilkinson, G. Varney, M. Martinez-Szewczyk, L. Yinong, J.K. Nimmagadda, S. Samant, Y. Wu, L. Pan, **L.G. Jacobsohn**, Q. Wilkinson, F. Duru, and U. Akgun  
Journal of Instrumentation **14**, P06013; 11 pages (2019)  
DOI: 10.1088/1748-0221/14/06/P06013
10. *Progress and challenges towards the development of a new optically stimulated luminescence (OSL) material based on  $\text{MgB}_4\text{O}_7:\text{Ce},\text{Li}$*   
T.D. Gustafson, E.D. Milliken, **L.G. Jacobsohn**, and E.G. Yukihiro  
Journal of Luminescence **212**, 242-249 (2019)  
DOI: 10.1016/j.jlumin.2019.04.028
11. *Effects of sintering temperature on the microstructure and luminescence of  $\text{LuAG}:\text{Pr}$  ceramics*  
A.A. Trofimov, M.R. Marchewka, and **L.G. Jacobsohn**  
Radiation Measurements **122**, 34-39 (2019)  
DOI: 10.1016/j.radmeas.2019.01.005
12. *Luminescence of undoped commercial ZnS crystals: evidence on the role of impurities using photoluminescence and electrical transient spectroscopy*  
M. Saleh, K. Lynn, **L.G. Jacobsohn**, and J.S. McCloy  
Journal of Applied Physics **125**, 075702-1 to 21 (2019)  
DOI: 10.1063/1.5084738
13. *Fabrication and characterization of ZnS:Ag-based ultrafiltration membrane scintillator*  
Y. Wu, A.W. Darge, A.A. Trofimov, C. Li, K.S. Brinkman, S.M. Husson, and **L.G. Jacobsohn**  
Optical Materials **88**, 424-428 (2019)  
DOI: 10.1016/j.optmat.2018.12.009
14. *Laser sintering and photoluminescence study of Tb-doped yttrium aluminum garnet ceramics*

J.C.A. Santos, E.P. Silva, N.R.S. Souza, Y.G.S. Alves, D.V. Sampaio, C. Kucera, **L.G. Jacobsohn**, J. Ballato, and R.S. Silva  
Ceramics International **45**, 3797-3802 (2019)  
DOI: 10.1016/j.ceramint.2018.11.048

15. *Thermoluminescence and radioluminescence of alexandrite mineral*  
N.M. Trindade, M.R. da Cruz, H. Kahn, **L.G. Jacobsohn**, and E.M. Yoshimura  
Journal of Luminescence **206**, 455-461 (2019)  
DOI: 10.1016/j.jlumin.2018.10.114
16. *Correlation between thermoluminescence and optically stimulated luminescence of  $\alpha$ - $Al_2O_3:C,Mg$*   
N.M. Trindade, **L.G. Jacobsohn**, and E.M. Yoshimura  
Journal of Luminescence **206**, 298-301 (2019)  
DOI: 10.1016/j.jlumin.2018.10.084
17. *Fabrication and characterization of a composite dosimeter based on natural alexandrite*  
N.M. Trindade, A.L.M.C. Malthez, A.C. Nascimento, R.S. Silva, **L.G. Jacobsohn**, and E.M. Yoshimura  
Optical Materials **85**, 281-286 (2018)  
DOI: 10.1016/j.optmat.2018.08.066
18. *Thermoluminescence and radioluminescence of  $\alpha$ - $Al_2O_3:C,Mg$  at high temperatures*  
N.M. Trindade and **L.G. Jacobsohn**  
Journal of Luminescence **204**, 589-602 (2018)  
DOI: 10.1016/j.jlumin.2018.08.018
19. *Investigation of  $Ce^{3+}$  luminescence in borate-rich borosilicate glasses*  
M.W. Kielty, M. Dettmann, V. Herrig, M.G. Chapman, M.R. Marchewka, A.A. Trofimov, U. Akgun, and **L.G. Jacobsohn**  
Journal of Non-Crystalline Solids **471**, 357-361 (2017)  
DOI: 10.1016/j.jnoncrysol.2017.06.022
20. *Radioluminescence and thermoluminescence of rare earth doped and co-doped  $YF_3$*   
**L.G. Jacobsohn**, C.L. McPherson, L.C. Oliveira, C.J. Kucera, J. Ballato, and E.G. Yukihara  
Radiation Measurements **106**, 79-83 (2017)  
DOI: 10.1016/j.radmeas.2017.05.001
21. *Permeation and optical properties of  $YAG:Er^{3+}$  fiber membrane scintillators prepared by novel sol-gel/electrospinning method*  
Z. Chen, A.A. Trofimov, **L.G. Jacobsohn**, H. Xiao, K. Kornev, D. Xu, and F. Peng  
**Cover** - Journal of Sol-Gel Science and Technology **83**, 35-43 (2017)  
DOI: 10.1007/s10971-017-4387-y

22. *Laser sintering of persistent luminescent CaAl<sub>2</sub>O<sub>4</sub>:Eu<sup>2+</sup>Dy<sup>3+</sup> ceramics*  
N.R.S. Souza, D.C. Silva, D.V. Sampaio, M.V.S. Rezende, C. Kucera, A.A. Trofimov, **L.G. Jacobsohn**, J. Ballato, and R.S. Silva  
Optical Materials **68**, 2-6 (2017)  
DOI: 10.1016/j.optmat.2016.10.050
23. *Luminescence investigation of Ce incorporation in garnet-type Li<sub>7</sub>La<sub>3</sub>Zr<sub>2</sub>O<sub>12</sub>*  
A.A. Trofimov, C. Li, K.S. Brinkman, and **L.G. Jacobsohn**  
Optical Materials **68**, 7-10 (2017)  
DOI: 10.1016/j.optmat.2016.09.058
24. *Direct inkjet printing of miniaturized luminescent YAG:Er<sup>3+</sup> from sol-gel precursor*  
Y. Hong, Z. Chen, A.A. Trofimov, J. Lei, J. Chen, L. Yuan, W. Zhu, H. Xiao, D. Xu, **L.G. Jacobsohn**, K.G. Kornev, R.K. Bordia, and F. Peng  
Optical Materials **68**, 11-18 (2017)  
DOI: 10.1016/j.optmat.2016.12.020
25. *Incorporation of Pr into LuAG ceramics*  
M.R. Marchewka, M.G. Chapman, H. Qian and **L.G. Jacobsohn**  
Optical Materials **68**, 53-57 (2017)  
DOI: 10.1016/j.optmat.2016.09.056
26. *High-density scintillating glasses for a proton imaging detector*  
I.J. Tillman, M.A. Dettman, V.V. Herrig, Z.L. Thune, A.J. Zieser, S.F. Michalek, M.O. Been, M.M. Martinez-Szewczyk, H.J. Koster, C.J. Wilkinson, M.W. Kielty, **L.G. Jacobsohn**, and U. Akgun  
Optical Materials **68**, 58-62 (2017)  
DOI: 10.1016/j.optmat.2016.10.015
27. *Thick Er-doped silica films sintered using CO<sub>2</sub> laser for scintillation applications*  
J. Lei, A.A. Trofimov, J. Chen, Z. Chen, Y. Hong, L. Yuan, W. Zhu, Q. Zhang, **L.G. Jacobsohn**, F. Peng, R.K. Bordia, and H. Xiao  
Optical Materials **68**, 63-69 (2017)  
DOI: 10.1016/j.optmat.2017.03.035
28. *Effects of sintering temperature on open-volume defects and thermoluminescence of yttria and lutetia ceramics*  
M.G. Chapman, R.C. Walker II, J.M. Schmitt, C.L. McPherson, F. Ameena, C.J. Kucera, C.A. Quarles, T.A. DeVol, J. Ballato, and **L.G. Jacobsohn**  
Journal of the American Ceramic Society **99**, 1449-1454 (2016)
29. *A neutron detector based on boron-10 enriched scintillating glasses*  
D. Vu, M. Dettmann, V. Herrig, **L.G. Jacobsohn**, M.W. Kielty, J. Wetzels, Y. Onel, and U.

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Additive Manufacturing and Strategic Technologies in Advanced Ceramics, Ceramic Transactions vol. **258**, 59-68 (2016)

30. *Stability of grafted polymer nanoscale films toward gamma irradiation*  
N. Borodinov, J. Giammarco, N. Patel, A. Agarwal, K.R. O'Donnell, C.J. Kucera, **L.G. Jacobsohn**, and I. Luzinov  
ACS Applied Materials & Interfaces **7**, 19455-19465 (2015) (+ supplement S1-S5)
31. *Luminescence and scintillation enhancement of  $Y_2O_3:Tm$  transparent ceramic through post-fabrication thermal processing*  
M.G. Chapman, M.R. Marchewka, S.A. Roberts, J.M. Schmitt, C. McMillen, C.J. Kucera, T.A. DeVol, J. Ballato, and **L.G. Jacobsohn**  
Journal of Luminescence **165**, 56-61 (2015) + supplementary material
32. *Investigation of Er-doped  $Sc_2O_3$  transparent ceramics by positron annihilation spectroscopy*  
**L.G. Jacobsohn**, K. Serivalsatit, C.A. Quarles, and J. Ballato  
Journal of Materials Science **50**, 3183-3188 (2015)
33. *Luminescence and thermal lensing characterization of singly  $Eu^{3+}$  and  $Tm^{3+}$  doped  $Y_2O_3$  transparent ceramics*  
P. Y. Poma, K. Upendra Kumar, M. V. D. Vermelho, K. Serivalsatit, S. A. Roberts, C. J. Kucera, J. Ballato, **L. G. Jacobsohn**, and C. Jacinto  
Journal of Luminescence **161**, 306-312 (2015)
34. *Rare earth-doped nanocrystalline  $MgF_2$ : synthesis, luminescence and thermoluminescence*  
**L.G. Jacobsohn**, A.L. Roy, C.L. McPherson, C.J. Kucera, L.C. Oliveira, E.G. Yuki-hara, and J. Ballato  
Optical Materials **35**, 2461-2464 (2013)
35. *Systematic development of new thermoluminescence and optically stimulated luminescence materials*  
E.G. Yuki-hara, E.D. Milliken, L.C. Oliveira, V.R. Orante-Barrón, **L.G. Jacobsohn**, and M.W. Blair  
Journal of Luminescence **133**, 203-210 (2013)
36. *Spectral engineering of  $LaF_3:Ce^{3+}$  nanoparticles: the role of  $Ce^{3+}$  in surface sites*  
**L.G. Jacobsohn**, A. Toncelli, K.B. Sprinkle, C.J. Kucera, and J. Ballato  
Journal of Applied Physics **111**, 074315 (5 pages) (2012)
37. *Electron energy-loss spectroscopy investigation of dopant homogeneity in Tb-doped  $Y_2O_3$  nanoparticles prepared by solution combustion synthesis*

- L.G. Jacobsohn**, R. Wang, P. Crozier, B.L. Bennett and R.E. Muenchausen  
Optical Materials **34**, 671-674 (2012)
38. *Scintillation of rare earth doped fluoride nanoparticles*  
**L.G. Jacobsohn**, C.L. McPherson, K.B. Sprinkle, E.G. Yukihara, T.A. DeVol and J. Ballato  
Applied Physics Letters **99**, 113111 (3 pages) (2011)
39. *Synthesis, structure and scintillation of Ce-doped gadolinium oxyorthosilicate nanoparticles prepared by solution combustion synthesis*  
**L.G. Jacobsohn**, S.C. Tornga, M.W. Blair, B.L. Bennett, R.E. Muenchausen, R. Wang, P.A. Crozier and D.W. Cooke  
Journal of Applied Physics **110**, 083515 (7 pages) (2011)
40. *Fluoride nanoscintillators*  
**L.G. Jacobsohn**, K.B. Sprinkle, S.A. Roberts, C.J. Kucera, T.L. James, E.G. Yukihara, T.A. DeVol and J. Ballato  
Special issue "Nanocrystals-Related Synthesis, Assembly, and Energy Applications" of Journal of Nanomaterials **2011**, article ID 523638 (6 pages) (2011);  
doi:10.1155/2011/523638
41. *Luminescence properties of MgO produced by solution combustion synthesis and doped with lanthanides and Li*  
V.R. Orante-Barrón, L.C. Oliveira, J.B. Kelly, E.D. Milliken, G. Denis, M.W. Blair, **L.G. Jacobsohn**, J. Puckette, and E.G. Yukihara  
Journal of Luminescence **131**, 1058-1065 (2011)
42. *Structural and optical properties of rare earth-doped  $(Ba_{0.77}Ca_{0.23})_{1-x}RE_xTiO_3$  ( $RE = Sm, Nd, Pr, Yb$ )*  
A.P.A. Moraes, P.T.C. Freire, J. Mendes Filho, A.G. Souza Filho, J.C.M'Peko, A.C. Hernandez, E. Antonelli, **L.G. Jacobsohn**, Michael W. Blair, Ross E. Muenchausen, and W. Paraguassu  
Journal of Applied Physics **109**, 124102 (8 pages) (2011)
43. *Synthesis, luminescence and scintillation of rare earth doped lanthanum fluoride nanoparticles*  
**L.G. Jacobsohn**, K.B. Sprinkle, C.J. Kucera, T.L. James, S.A. Roberts, H. Qian, E.G. Yukihara, T.A. DeVol and J. Ballato  
Optical Materials **33**, 136-140 (2010)
44. *Luminescence properties of Ce-doped oxyorthosilicate nanophosphors and single crystals*  
E.G. Yukihara, **L.G. Jacobsohn**, M.W. Blair, B.L. Bennett, S.C. Tornga and R.E. Muenchausen  
Journal of Luminescence **130**, 2309-2316 (2010)

45. *Synthesis and luminescent characteristics of one-dimensional europium doped Gd<sub>2</sub>O<sub>3</sub> phosphors*  
T.-K. Tseng, J. Choi, **L.G. Jacobsohn**, E. Yukihiro, M. Davidson, and P.H. Holloway  
Applied Physics A **100**, 1137-1142 (2010)
46. *Annealing effects on the photoluminescence yield of Gd<sub>2</sub>O<sub>3</sub>:Eu nanoparticles produced by solution combustion synthesis*  
**L.G. Jacobsohn**, S.C. Tornga, B.L. Bennett, R.E. Muenchausen, O. Ugurlu, T.-K. Tseng, J. Choi and P.H. Holloway  
Radiation Measurements **45**, 611-614 (2010)
47. *Feasibility of using oxyorthosilicates as optically stimulated luminescence detectors*  
J.R. Hazelton, E.G. Yukihiro, **L.G. Jacobsohn**, M.W. Blair, and R. Muenchausen  
Radiation Measurements **45**, 681-683 (2010)
48. *Preparation and characterization of rare earth doped fluoride nanoparticles*  
**L.G. Jacobsohn**, C.J. Kucera, T.L. James, K.B. Sprinkle, J.R. DiMaio, B. Kokuoz, B. Yazgan Kokuoz, T.A. DeVol and J. Ballato  
**Invited Review** for the special issue "Luminescent Materials" in Materials **3**, 2053-2068 (2010) [<http://www.mdpi.com/1996-1944/3/3/2053>]
49. *The effect of hydrostatic pressure on the combustion synthesis of Y<sub>2</sub>O<sub>3</sub>:Bi nanophosphor*  
**L.G. Jacobsohn**, B.C. Tappan, S.C. Tornga, M.W. Blair, E.P. Luther, B.A. Mason, B.L. Bennett, and R.E. Muenchausen  
Optical Materials **32**, 652-656 (2010)
50. *Nanophosphor aluminum oxide: luminescence response of a potential dosimetric material*  
M.W. Blair, **L.G. Jacobsohn**, S.C. Tornga, O. Ugurlu, B.L. Bennett, E.G. Yukihiro, and R.E. Muenchausen  
Journal of Luminescence **130**, 825-831 (2010)
51. *Luminescence and structural properties of oxyorthosilicate and Al<sub>2</sub>O<sub>3</sub> nanophosphors*  
M.W. Blair, **L.G. Jacobsohn**, B.L. Bennett, S.C. Tornga, E.G. Yukihiro, E.A. McKigney, and R.E. Muenchausen  
**Invited paper** to the 3<sup>rd</sup> International Conference on Optical, Optoelectronic and Photonic Materials and Applications, Edmonton, Canada, 20-25 July, 2008  
Physica Status Solidi A **206**, 904-909 (2009)
52. *Radioluminescence investigation of ion-irradiated phosphors*  
**L.G. Jacobsohn**, B.L. Bennett, R.E. Muenchausen, M.S. Martin, and L. Shao  
**Invited paper** to the 20<sup>th</sup> International Conference on the Application of Accelerators in Research and Industry, Fort Worth, August 10-15, 2008  
Application of Accelerators in Research and Industry: 20<sup>th</sup> International Conference,

American Institute of Physics Conference Proceedings **1099**, 977-980 (2009)

53. *Y<sub>2</sub>O<sub>3</sub>:Bi nanophosphor: solution combustion synthesis, structure and luminescence*  
**L.G. Jacobsohn**, M.W. Blair, S.C. Tornga, L.O. Brown, B.L. Bennett, and R.E. Muenchausen  
Journal of Applied Physics **104**, 124303 (7 pages) (2008)
54. *Multi-function Gd<sub>2</sub>O<sub>3</sub>:Eu nanocrystals produced by solution combustion synthesis: structural, luminescent and magnetic characterization*  
**L.G. Jacobsohn**, B.L. Bennett, R.E. Muenchausen, S.C. Tornga, J.D. Thompson, O. Ugurlu, D.W. Cooke and A.L. Lima Sharma  
Journal of Applied Physics **103**, 104303 (6 pages) (2008)
55. *Science and application of oxyorthosilicate nanophosphors*  
R.E. Muenchausen, E.A. McKigney, **L.G. Jacobsohn**, M.W. Blair, B.L. Bennett and D.W. Cooke  
IEEE Transactions on Nuclear Science **55**, 1532-1535 (2008)
56. *EPR and luminescence of F<sup>+</sup> centers in bulk and nanophosphor oxyorthosilicates*  
D.W. Cooke, M.W. Blair, J.F. Smith, B.L. Bennett, **L.G. Jacobsohn**, E.A. McKigney and R.E. Muenchausen  
IEEE Transactions on Nuclear Science **55**, 1118-1122 (2008)
57. *Synthesis and structural transformation of luminescent nanostructured Gd<sub>2</sub>O<sub>3</sub>:Eu produced by solution combustion synthesis*  
**L.G. Jacobsohn**, B.L. Bennett, S.C. Sitarz, O. Ugurlu, A.L. Lima Sharma, D.W. Cooke and R.E. Muenchausen  
Materials Research Society Symposium Proceedings vol. **1056**, HH08-06 (7 pages) (2008)
58. *Structure and luminescence of Ce-doped Lu<sub>2</sub>SiO<sub>5</sub> nanophosphor*  
M.W. Blair, **L.G. Jacobsohn**, B.L. Bennett, R.E. Muenchausen, S.C. Sitarz, J.F. Smith, D.W. Cooke, P.A. Crozier and R. Wang  
Materials Research Society Symposium Proceedings vol. **1056**, HH07-06 (6 pages) (2008)
59. *Luminescent properties of nanophosphors*  
**L.G. Jacobsohn**, B.L. Bennett, R.E. Muenchausen, J.F. Smith, and D.W. Cooke  
Radiation Measurements **42**, 675-678 (2007)
60. *Nanocomposite scintillators for radiation detection and nuclear spectroscopy*  
E.A. McKigney, R.E. Del Sesto, **L.G. Jacobsohn**, P.A. Santi, R.E. Muenchausen, K.C. Ott, T.M. McCleskey, B.L. Bennett, J.F. Smith and D.W. Cooke  
Nuclear Instruments and Methods in Physics Research A **579**, 15-18 (2007)
61. *Effects of Tb doping on the photoluminescence of Y<sub>2</sub>O<sub>3</sub>:Tb nanophosphors*  
R.E. Muenchausen, **L.G. Jacobsohn**, B.L. Bennett, E.A. McKigney, J.F. Smith, J.A. Valdez,



- and D.W. Cooke  
Journal of Luminescence **126**, 838-842 (2007)
62. *The central role of oxygen on  $H^+$  irradiated  $Lu_2SiO_5$  luminescence*  
**L.G. Jacobsohn**, B.L. Bennett, J.-K. Lee, R.E. Muenchausen, J.F. Smith, B.P. Uberuaga and D.W. Cooke  
Journal of Luminescence **124**, 173-177 (2007)
63. *Effects of ion beam irradiation on self-trapped defects in single-crystal  $Lu_2SiO_5$*   
**L.G. Jacobsohn**, J.-K. Lee, B.L. Bennett, R.E. Muenchausen, M. Nastasi and D.W. Cooke  
Journal of Luminescence **124**, 5-9 (2007)
64. *Magnetic properties of cobalt nanoparticles obtained by ion implantation into amorphous silica*  
**L.G. Jacobsohn**, J.D. Thompson, R.M. Dickerson and M. Nastasi  
Nuclear Instruments and Methods in Physics Research B **257**, 447-450 (2007)
65. *Deposition of hard amorphous hydrogenated carbon films by radiofrequency parallel-plate hollow-cathode plasmas*  
G. Capote, **L.G. Jacobsohn**, M.D. Michel, C.M. Lepienski, A.L. Vieira and D.F. Franceschini  
Diamond and Related Materials **16**, 616-622 (2007)
66.  *$LaF_3:Ce$  nanocomposite scintillator for gamma-ray detection*  
E. A. McKigney, R.E. Muenchausen, D. W. Cooke, R. E. Del Sesto, R. D. Gilbertson, M. K. Bacrania, B. L. Bennett, **L.G. Jacobsohn**, T. M. McClesky, K. C. Ott, S.C. Sitarz, J. F. Smith, and S. Stange  
Hard X-Ray and Gamma-Ray Detector Physics IX, Proceedings of SPIE vol. **6706**, 67061A (11 pages) (2007)
67. *A novel method for extracting oscillator strength of rare-earth ion optical transitions in nanostructured dielectric materials*  
R.E. Muenchausen, **L.G. Jacobsohn**, B.L. Bennett, E.A. McKigney, J.F. Smith, and D.W. Cooke  
Solid State Communications **139**, 497-500 (2006)
68. *Luminescent properties and reduced dimensional behavior of hydrothermally prepared  $Y_2SiO_5:Ce$  nanophosphors*  
D.W. Cooke, J.-K. Lee, B. L. Bennett, J. R. Groves, **L.G. Jacobsohn**, E. A. McKigney, R. E. Muenchausen, M. Nastasi, K.E. Sickafus, M. Tang, J. A. Valdez, J.-Y. Kim and K.S. Hong  
Applied Physics Letters **88**, 103108 (3 pages) (2006)
69. *Optical and structural characterization of nanostructured  $Y_2O_3:Tb$*   
**L.G. Jacobsohn**, B.L. Bennett, R.E. Muenchausen, J.F. Smith, and D.W. Cooke  
Nanophotonic Materials III, Proceedings of SPIE vol. **6321**, 63210J-1 to 9 (2006)

70. *Effects of ion irradiation on cobalt nanocomposite*  
**L.G. Jacobsohn**, J.D. Thompson, Y. Wang, A. Misra, R.K. Schulze and M. Nastasi  
Nuclear Instruments and Methods in Physics Research B **250**, 201-205 (2006)
71. *Array of cobalt nanoparticles: synthesis and effects of thermal annealing*  
**L.G. Jacobsohn**, J.D. Thompson, A. Misra, R.K. Schulze, M.F. Hundley and M. Nastasi  
Journal of Applied Physics **99**, 104307 (6 pages) (2006)
72. *Investigation of the magnetic susceptibility of nanocomposites obtained in zero-field-cooled conditions*  
**L.G. Jacobsohn**, M.F. Hundley, J.D. Thompson, R.M. Dickerson and M. Nastasi  
Journal of Vacuum Science and Technology B **24**, 321-325 (2006)
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4. *Photonic crystals for enhanced light outcoupling of scintillation based detectors*  
R.D. Torres, L.T. Sexton, G. Koley, and **L.G. Jacobsohn**  
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