



Dr. Annamma John

Associate Professor / Research Guide

Phone: +91 471 2534475

e-mail: j_annamma@yahoo.com

RESIDENTIAL ADDRESS

No.8, LMS Nagar
Muttada P. O.
Thiruvananthapuram-695 025

EDUCATIONAL DETAILS

Bachelor of Science : St. Joseph's College for Women, Alappuzha, 1987

Master of Science : Department of Physics, University of Kerala, 1989

Master of Philosophy : Department of Physics, University of Kerala, 1992

Supervisor: Dr. G. Aruldas, Professor and Head (former), Department of Physics, University of Kerala, Kariavattom, Thiruvananthapuram-695 581, India

Title of the dissertation: High Temperature Dielectric Measurements of $(\text{H}_3\text{NCH}_2\text{CH}_2\text{NH}_3)(\text{NO}_3)_2$ and Vibrational Spectra of $\text{Zn}_3\text{K}_2(\text{HPO}_3)_4$

Doctor of Philosophy : Department of Physics, University of Kerala, April 2000

Field of Work : Vibrational Spectroscopy

Supervisor: Dr. S. Devanarayanan, Professor and Head (former), Department of Physics, University of Kerala, Kariavattom, Thiruvananthapuram- 695 581, India

Title of the thesis: Spectroscopic Investigations of Certain Newly Synthesized Phosphate Compounds

RESEARCH INTERESTS

Infrared and Raman Spectroscopy
Surface Enhanced Raman Scattering (SERS) Spectroscopy
Electronic materials

EXPERIENCE

Research: 21 years (Vibrational spectroscopy)

Teaching: 15 years (Physics and Electronics)

PUBLICATIONS

24 papers in SCI Journals

4 seminar presentations

Ph.D. STUDENTS

Shyla Joseph
Remya G.R.
Resmi S.
Vivekanandan R.S.

PERSONAL DETAILS: Indian, Born on 15 February 1967

List of Publications

- 1) **Annamma John** & S. Devanarayanan, q-Deformed quantized oscillator. I. Specific heats of cesium and rubidium *Ind. J. Pure Appl. Phys.* **35**, 387-393 (1997)
- 2) **Annamma John**, Z. Zdravkova & S. Devanarayanan, Vibrational analysis of Nickel(II) and Zinc(II) complexes of Diethyl(2-oxo-1-phenyl)ethyl phosphonate *Ind. J. Phys.* **73B**, 679-684 (1999)
- 3) **Annamma John**, Makoto Watanabe & S. Devanarayanan, Vibrational spectra of four alkaline earth cyclo-hexaphosphates *Spectrochim. Acta* **56A**, 877-885 (2000)

- 4) **Annamma John**, Daizy Philip, Keith R. Morgan & S. Devanarayanan, IR and Raman spectra of two layered Aluminium Phosphates $\text{Co(en)}_3\text{Al}_3\text{P}_4\text{O}_{16}\cdot 3\text{H}_2\text{O}$ and $[\text{NH}_4]_3[\text{Co}(\text{NH}_3)_6]_3[\text{Al}_2(\text{PO}_4)_4]_2\cdot 2\text{H}_2\text{O}$ *Spectrochim. Acta* **56A**, 2715-2723 (2000)
- 5) **Annamma John**, Daizy Philip, Abdallah Khaoulani Idrissi, Gabor Keresztury & S. Devanarayanan, IR and Polarized Raman Spectra of Anilinium Hydrogen Phosphite, $\text{C}_6\text{H}_5\text{NH}_3^+\text{HPO}_3\text{H}^-$ *J. Raman Spectrosc.* **31**, 1067-1071 (2000)
- 6) **Annamma John**, Daizy Philip, Norbert Stock, Wolfgang Schnick & S. Devanarayanan, Vibrational Analysis of $\text{Ag}_3(\text{PO}_2\text{NH})_3$, $\text{Na}_3(\text{PO}_2\text{NH})_3\cdot\text{H}_2\text{O}$, $\text{Na}_3(\text{PO}_2\text{NH})_3\cdot 4\text{H}_2\text{O}$, $[\text{C}(\text{NH}_2)_3]_3(\text{PO}_2\text{NH})_3\cdot\text{H}_2\text{O}$ and $(\text{NH}_4)_4(\text{PO}_2\text{NH})_4\cdot 4\text{H}_2\text{O}$ *Spectrochim. Acta* **57A**, 959-969 (2001)
- 7) Daizy Philip, **Annamma John**, C. Yohannan Paniker & Tresa Varghese, FT-IR, FT-Raman and SERS spectra of Sodium Salicylate *Spectrochim. Acta* **57A**, 1561-1566 (2001)
- 8) Yohannan Paniker, Tresa Varghese, **Annamma John**, Daizy Philip, Kristina Istvan & Gabor Keresztury, FT-IR, FT-Raman and FT-SERS Spectra of 4-Aminosalicylic Acid Sodium Salt Dihydrate, *Spectrochim. Acta* **58A**, 281-287 (2002)
- 9) **Annamma John**, Daizy Philip, Aurelio Cabeza & S. Devanarayanan, Vibrational Spectra of Lead(II) Phenylphosphonate, $\text{Pb}(\text{O}_3\text{PC}_6\text{H}_5)$ *Ind. J. Phys.* **76B**, 213 – 215 (2002)
- 10) Yohannan Paniker, Tresa Varghese, **Annamma John**, Daizy Philip & H. I. S. Nogueira, Vibrational Spectra of Melamine Diborate, $\text{C}_3\text{N}_6\text{H}_6\cdot 2\text{H}_3\text{BO}_3$ *Spectrochim. Acta* **58A**, 1545-1551 (2002)
- 11) R. S. Jayasree, M. J. Bushiri, **Annamma John** & V. U. Nayar, Temperature dependent polarized Raman spectra of non-aqua lanthanoid (Pr) single crystal *Spectrochim. Acta* **64A**, 518-525 (2006)
- 12) H. Padma Kumar, James T. Joseph, J. K. Thomas, M. R. Varma, **Annamma John** & Sam Solomon, Influence of zinc oxide addition on LnTiTaO_6 ($\text{Ln} = \text{Pr}, \text{Sm}$ and Dy) materials for dielectric resonators *Mater. Sci. Eng. B* **2007**
- 13) H. Padma Kumar, **Annamma John**, C. Vijayakumar, J. K. Thomas, M. R. Varma & Sam Solomon, Synthesis of low loss, thermally stable $\text{Ce}_x\text{Y}_{1-x}\text{TiTaO}_6$ microwave ceramics *Mater. Res. Bull.* (2008),
- 14) H. Padma Kumar, M. K. Suresh, J. K. Thomas, **Annamma John**, Benny George & Sam Solomon, Effect of WO_3 and MoO_3 addition on LnTiTaO_6 ($\text{Ln} = \text{Ce}, \text{Pr}$ and Nd) microwave ceramics *J. Alloys Compd.* (2008)
- 15) C. Vijayakumar, H. Padma Kumar, Sam Solomon, J. K. Thomas, P. R. S. Wariar, & **Annamma John**, FT-Raman and FT-IR vibrational spectroscopic studies of nanocrystalline $\text{Ba}_2\text{RE}_2\text{SbO}_6$ ($\text{RE} = \text{Sm}, \text{Gd}, \text{Dy}$ and Y) perovskites *J. Alloys Compd.* (2009)

- 16) J. K. Thomas, H. Padma Kumar, **Annamma John**, V. Suni, K. Joy, S. Solomon & J. Koshy, Nanocrystalline $\text{GdBa}_2\text{HfO}_{5.5}$ perovskite dielectric material – A single step synthesis and its characterization *J. Phys. Chem. Solids* (2009)
- 17) Shyla Joseph, M. K. Suresh, Jijimon K. Thomas, **Annamma John** & S. Solomon, Synthesis, Characterisation and Spectroscopic Analysis of $\text{Nd}_x\text{Y}_{1-x}\text{TiNbO}_6$ Microwave Ceramics *Int. J. Appl. Ceram. Technol.* (2009)
- 18) M. K. Suresh, J. K. Thomas, H. Sreemoolanadhan, C. N. George, **Annamma John**, S. Solomon, P. R. S. Wariar and J. Koshy, Synthesis of nanocrystalline magnesium titanate by an auto-igniting combustion technique and its structural, spectroscopic and dielectric properties *Mater. Res. Bul.* (2010) (in press)
- 19) H. Padma Kumar, **Annamma John**, J.K. Thomas and Sam Solomon, PbO doped Lanthanide Titanium Tantalate microwave ceramics *Bulletin of Material Science* (2010) (in press)
- 20) Sam Solomon, Dhvajam D.B, Remya G.R, **Annamma John**, Jijimon K Thomas, Fabrication and characterization of $x\text{PrTiTaO}_6$ (1-x) YTiNbO_6 microwave ceramic composites. *Journal of Alloys and Compounds* 2010 (504) 151-154
- 21) Shyla Joseph, M.K. Suresh, J.K. Thomas, **Annamma John**, Sam Solomon, Synthesis, Characterization, and Spectroscopic Analysis of $\text{Nd}_x\text{Y}_{1-x}\text{TiNbO}_6$ Microwave Ceramics, *Int. J. Appl. Ceram. Technol.* Volume 7, 2010
- 22) M.K. Suresh, **Annamma John**, J.K. Thomas, P.R.S. Wariar, Sam Solomon, Structural, spectroscopic and dielectric investigations on $\text{Ba}_8\text{Zn}(\text{Nb}_6-x\text{Sbx})\text{O}_{24}$ microwave ceramics, *Materials Research Bulletin* (2010) (in press)
- 23) Sam Solomon, Madukayil Kunjoonju Suresh, **Annamma John**, Jijimon Kumpukattu Thomas and Palakkattumala Ramachandra Sobhana Wariar, Fabrication and Characterization of $\text{Ba}_8\text{Zn}(\text{Ta}_6-x\text{Sbx})\text{O}_{24}$ Microwave Ceramics *International Journal of applied ceramic technology* (2010)
- 24) M.K. Suresh, **Annamma John**, J.K. Thomas, P.R.S. Wariar, Sam Solomon, Structural analysis and properties of thermally stable $\text{Ba}_8\text{Mg}(\text{Nb}_6-x\text{Sbx})\text{O}_{24}$ microwave ceramics *Journal of Alloys and Compounds* (2010)

Seminar Presentations

- (1) $\text{Sm}_{3/4}\text{Er}_{1/4}\text{TiNb}_x\text{Ta}_{1-x}\text{O}_6$ – Electronic Materials for Microwave Communication, H. Padmakumar, **Annamma John**, Lovely Jacob, J. K. Thomas, M. R. Varma and Sam Solomon, National Conference on Recent Trends in Optoelectronics and Laser Technology (NCOL 2007), 9-11 April 2007 organized by the Department of Physics, University of Kerala, Thiruvananthapuram
- (2) Spectroscopic Investigations on $\text{Ln}(\text{Zr}_{1/3}\text{Ti}_{2/3})\text{TaO}_6$ (Ln = Ce, Pr, Nd and En) ceramics **Annamma John**, Sam Solomon, H. Padmakumar, M. K. Suresh, C. S. Prasanth, A. S. Deepa and J. K. Thomas, 2nd International Conference on Perspectives in Vibrational Spectroscopy (ICOPVS 2008) 24-28 February 2008 organized by the Department of Physics, Mar Ivanios College, Thiruvananthapuram
- (3) Structural analysis and microwave dielectric properties of $\text{Ln}_{2/3}\text{Gd}_{1/3}\text{TiNbO}_6$ (Ln = Ce, Pr, Nd and Sm) ceramics, Shyla Joseph, **Annamma John** and Sam Solomon, 21st Kerala Science Congress 2009, 28-31 January 2009, Kollam
- (4) Synthesis and characterisation of $\text{Ln}_{2/3}\text{Dy}_{1/3}\text{TiNbO}_6$ (Ln = Ce, Pr, Nd and Sm) microwave ceramics, Shyla Joseph, **Annamma John**, J. K. Thomas and Sam Solomon, 97th Indian Science Congress, 3-7 January 2010, Kerala.