

## CURRICULUM VITAE

NAME : **Dr. Manoj Johri**

FATHER'S NAME : Late Prof. G.K. JOHRI

ADDRESS : 117/Q/719 FLAT No.302, Sarojini Apartment,  
Sharda Nagar, Kanpur, (U.P.) INDIA

PHONE NO : +91-9839283691(mob), 2305466 (O)  
E-mail: [mjohri\\_knp@yahoo.co.in](mailto:mjohri_knp@yahoo.co.in)

DATE OF BIRTH : January 1, 1968

MARITAL STATUS : Married

NATIONALITY : Indian

PRESENT STATUS : **Professor**  
Department of Physics, D.A-V College, Kanpur

ADMINISTRATIVE POSITION : **Director** (D.V.S – C.A.S.T),  
1. Vocational and Professional Courses  
2. Department of Self-Finance, D.A-V. College,  
Kanpur.  
3. Research & Development Cell

### ACADEMIC QUALIFICATIONS:

DEGREE	YEAR	BOARD / UNIVERSITY	DIVISION & MARKS	SUBJECTS
HIGH SCHOOL	1983	U.P.BOARD, ALLAHABAD	<b>FIRST</b> 68.6%	HINDI, ENGLISH, MATHS BIOLOGY, SCIENCE <b>DISTINCTION IN MATHS</b>
INTERMEDIATE	1985	U.P.BOARD, ALLAHABAD	<b>FIRST</b> 65.0%	HINDI, ENGLISH, MATHS PHYSICS, CHEMISTRY <b>DISTINCTION IN</b>

				<b>PHYSICS</b>
B.Sc.	1987	KANPUR UNIVERSITY KANPUR	<b>SECOND</b> 56.0%	PHYSICS, MATHS, ELECTRONICS, <b>DISTINCTION IN ELECTRONICS</b>
M. Sc.	1989	KANPUR UNIVERSITY KANPUR	<b>FIRST</b> 75.0%	PHYSICS(ELECTRON ICS) <b>FIRST POSITION IN KANPUR UNIVERSITY AMONG (Physics) STUDENTS</b>
Ph.D.	1992	KANPUR UNIVERSITY KANPUR		PHYSICS

**ACADEMIC IDENTITY:**

Employee Id: T2297

Scopus Id: 210925007358

Orcid Id: 0000-0003-4968-0468

Google Scholar Id: KQjbxolAAAAJ

Researcher Id: AAZ-8859-2021

Vidwan Id: 226567

**TITLE OF Ph.D. THESIS:**

A STUDY OF MOLECULAR COLLISIONAL INTERACTION & CROSS-SECTIONS

**HONORS & AWARDS:**

1. Obtained **First position and Gold Medal** in 1989 from Kanpur University.
2. **Junior Associate of the Abdus Salam International Center for Theoretical Physics (ICTP), Trieste, Italy, from 1 January 2003 until 31 December 2010, Governed by UNESCO as Category Institute**

**MEMBER OF ACADEMIC SOCIETIES:**

1. Active Member of the NEWYORK ACADEMY OF SCIENCE, U.S.A.
2. Life Member, Indian Science Congress Association
3. Life Member, Indian Association of Physics Teachers

4. Life Member, Indian Liquid Crystal Society.
5. Life Member, National Academy of Science, Allahabad.

#### **FIELD OF RESEARCH:**

1. Dielectric Response and Non Resonant Absorption Study in Liquid Crystals and Organic Liquids.
2. Spectral Line shape (Molecular Dynamics) Intermolecular Forces and Resonant Absorption Study.
3. Molecular Structure Study in Excited Vibration States, Photonic Crystal, Left Handed and Meta Material.

#### **SUMMER SCHOOL COURSE, WORKSHOP AND PROJECTS:**

1. Electronics projects in M. Sc. and setup experiments in M.Sc. Laboratory.  
The project fabricated was judged to be the best in the college Lab.
2. Summer Project at Nuclear Science Centre, New Delhi, (July 15-27, 1991)
3. Research Project under the Pre-Doctoral **Robert A Welch Foundation Fellowships** at the Dept. of Physics, University of North Texas, U.S.A.
4. Visited IUCAA, Pune, India from June 19 to June 30, 1996, under Visitor program of the center.
5. Attended First Refresher course on Recent Trends in Physics, Udai Pratap College (Autonomous Institution), Varanasi, U.P., India, from Dec. 26, 1996 to Jan. 9, 1997.
6. Attended workshop on Modeling, Design and Characterization of Microelectronic Devices from March 25-26, 2000 at University of Delhi, South Campus, New Delhi.
7. Participated in **UNESCO Regional Training Course for University/College Teachers in “Fibre Optics”** from Feb, 12-24, 2001 at I.I.T. Kharagpur.
8. Participated in Technical Meeting on “Analytical Methods for Characterization of Hot Particles and their Impact on Environment, 6-10 March 6-10, 2006, Trieste, Italy.

9. Participated in Spring School on Super String Theory and Related Topics held at Abdus Salam, ICTP, Trieste, Italy, 27th March to 4th April, 2006.
10. Participated in XXIV Annual Convention of IAPT held at C.S.J.M. University, Kanpur from October 10-12, 2009.
11. "School on Synchrotron and Free-Electron-Laser Sources and their Multidisciplinary Applications" held at Abdus Salam ICTP, Trieste, Italy, 26 April-7 May 2010.
12. "Workshop on Entrepreneurship for Physicists and Engineers from Developing Countries" held at Abdus Salam ICTP, Trieste Italy 3-7 may 2010.
13. "Spring College on Computational Nanoscience" held at Abdus Salam, ICTP, Trieste, Italy, 17-28 May 2010.

#### **ADMINISTRATIVE TRAINING:**

Participated in training programme on Right to Information Act 2005, held at Deendayal Upadhyay State Institute of Rural Development, Bakshi-ka- Talab, Lucknow, U.P., 27-29 March, 2008.

#### **FOREIGN VISIT:**

1. Physics Department, **University of North Texas, USA** from November 26, 1989 to February 2, 1991, **Robert A- Welch pre-doctoral Fellow and Teaching Assistant.**
2. Department of Electronic Engineering, **OSAKA University, Japan** as **Guest Scientist** from June 21, 2000 to July 21, 2000.
3. Department of Electrical Engineering, **Nagoya University, Nagoya, Japan** from 1- 7 June 2003.
4. **Abdus Salam, ICTP, Trieste, Italy**, March 1st, APRIL 15, 2006 as Junior Associate
5. **Abdus Salam ICTP, Trieste, Italy**, March 20-June 15, 2010 as Junior Associate

#### **CAREER ADVANCEMENT SCHEME:**

1. Approved Ph.D. Supervisor in Physics, CSJM University, Kanpur.
2. Approved Supervisor in Physics of Alagappa University, Karaikudi, Tamilnadu.
3. Participated in U.G.C. Sponsored Refresher Course in Physics, Lucknow University, Nov 8<sup>th</sup> to 28<sup>th</sup> 2005, obtained Grade A and scored 75 %

**RESEARCH EXPERIENCE:** More than 32 years

**TEACHING EXPERIENCE:** More than 33 years

**RESEARCH EXPERIENCE:** More than 32 years

**Total No. of Papers Published** : 74  
**International Journal** : 41  
**International Proceedings** : 17  
**National Journals** : 09  
**National Proceedings** : 05  
**Internal Report** : 02  
**No. of Papers Presented** : 74 (Seventy Four)  
**International Conferences** : 21  
**National Conferences** : 53

**COLLABORATORS:**

IN INDIA Dr. D.C. Dwivedi, Dr. Dinesh Saxena, Dr. Shashi Kant Pathak, Dr. Nirupama Saxena, Dr. Pankaj Gupta (Kanpur University), Dr. R.P. Rishiswar (University of Delhi), Prof. Suresh Mehrotra, (Dr. Bhim Rao Ambedkar, Marathwada University) Prof. G.K. Johri, Dr. Saumya Saxena, Dr. D.C. Gupta, Dr. Akhilesh Tiwari, Dr. Sanjeev Johri, Mr. Kuldeep Srivastava, Dr. Rajesh Sharma and Prof. T. Bezboruah (Gauhati university), Dr. D.P. Singh and Dr. Abhay Saxena Prof. Ravindrathar (University of Allahabad)

ABROAD Prof. James A. Roberts, Prof. Paolo Grigolini, Dr. Jamal, Hajsaleh (University of North Texas, Denton Tx. USA), Dr. Mohammed Al. Share (Jordan), Prof. Katsumi Yoshino (Japan), Dr. Masanori Ozaki (Japan), Prof. Y.A. Ahmed (Nigeria), Hamandjoda. O (Cameroon), Harihar Paudyal and Narayan Prasad Adhikari (Nepal).

**Ph.D. THESIS SUPERVISED:** 3 (Three)  
1. Dr. Akhilesh Tiwari  
2. Dr. Rajesh Sharma  
3. Dr. D.P. Singh

**M. Phil. THESIS SUPERVISED:** 1 (One), Mr. Abhay Saxena

**M. Sc. THESIS SUPERVISED:** More than 50

## **EDUCATIONAL ACTIVITIES RELEVANT TO NATIONAL DEVELOPMENT:**

1. Introduced vocational courses in B.Sc., sponsored by the University Grants Commission, New Delhi, India :-
  - (i) Instrumentation
  - (ii) Computer Application
2. Introduced Courses given below :-
  - (a) Postgraduate Level
    - (i) M.Sc. Electronics
    - (ii) M.Sc. Biochemistry
    - (iii) M.Sc. Microbiology
    - (iv) M.A. (Education)
  - (b) Postgraduate Diploma Courses
    - (i) P.G. Diploma in Computer Application
  - (c) Graduate Level
    - (i) B.Sc. Biotechnology
    - (ii) B.Sc. Industrial Microbiology
    - (iii) B.Sc. Information Technology
    - (iv) B.A.
    - (v) B.Com.
3. Introduced B. Ed. at D.A-V. College, Kanpur under Self Finance Scheme
4. Introduced Career Oriented Courses sponsored by U.G.C.-2006 till date.
5. Active Association and Consultant Adviser in UGC Scheme of Innovative Instrumental Techniques and their Application
6. Member Board of Studies for Unified Syllabus in B.Sc. Electronics and Instrumentation
7. Member Board of Studies for Restructuring M.Sc. (Electronics) Syllabus.
8. Coordinator of National Seminar on “**Nano Science and Nano Biotechnology**” Sponsored by Department of Higher Education Government of Uttar Pradesh, Lucknow, Feb. 25-26, 2017

### **COLLEGE ACTIVITIES OTHER THAN ACADEMICS:**

1. Professor Incharge U.G.C. Cell, 2008 till date.
2. Member NAAC Coordination Committee-2007.
3. Member IQAC, 2010-2017.
4. Member Proctorial Board, 2005-2010.
5. Coordinator/Nodal Officer R.U.S.A., 2013 till date.
6. Member Election Committee for Students Union.
7. Senior Superintendent, University Semester Examination
8. Nodal Officer, D.C.F., AISHE (Continued)
9. Member U.G.C. Planning Board, 2014 till date.

### **CO-ORDINATOR/INCHARGE :-**

<b>Incharge</b>	<b>Coordinator</b>	<b>Year</b>
Department of Electronics		1999-2019
	Department of Instrumentation	1999-2015
	Department of Biochemistry	1999-2003
	PG Diploma in Microwave and Communication	1999-2000
	PG Diploma in Solid State Devices	1999-2005
	PG Diploma in Computer Application	1999-2003
	Department of Microbiology	1999-2003
	Environmental Physics	1999-2000
	Industrial Chemistry	1999-2000
	Electronic Equipment Maintenance	1999-2000
	Electrical Equipment Maintenance	1999-2000

### **Teaching Position:-**

<b>Position</b>	<b>Year</b>
Lecturer	1991-2000
Reader	2000-2006
Associate Professor	2006-2021
Professor	2021-Contd.

## **LIST OF RESEARCH PAPERS PUBLISHED**

### **A. PUBLISHED IN REFEREED JOURNALS**

#### **INTERNATIONAL JOURNALS:**

1. A Theoretical Model for Determining Oscillator Strength Using a Non-Spherical Molecular Cavity and Measurement of the He-Ne Laser Light Absorption Coefficient in Solutions.

**M. Johri**, G.K. Johri and J.A. Roberts

Physics, Chemistry Liquid 1991, 24, 71-77, IF: 1.915

Published by: Taylor and Francis, ISSN: 0031-0104 (Print) 1029-0451(Online)

U.G.C. Notified List S. No.- **29531**

2. Determination of Effective Potentials for Non-Polar Liquids Using the Continuum Dielectric Model.

**M. Johri**, G.K. Johri and J.A. Roberts

Physics, Chemistry Liquid 1991, 24, 71-77, IF: 1.915

Published by: Taylor and Francis, ISSN: 0031-0104 (Print) 1029-0451 (Online)

U.G.C. Notified List S. No.- **29531**

3. Dielectric Response of Select Ionic Solutions using a Loaded Microwave Cavity Operating Near 9,21 and 29 GHz as a probe.

G.K. Johri, **M. Johri** and J.A. Roberts

Jr. of Microwave Power and Electromagnetic Energy, 1991, 26, 81-89, IF: 1.325

Published by: International Microwave Power Institute, ISSN 0832- 7823

U.G.C. Notified List S. No.- **21676**

4. An Experimental Study of Collision Broadening Rotational Spectral Lines  $^{13}\text{CH}^{13}\text{C}^{15}\text{N}$  in the ground and  $n\nu = 1$  and 2 Vibrationally Excited State at Microwave Frequencies.

J. Hajsaleh, M.Al. Share, G.K. Johri, **M. Johri** and J.A. Roberts

J. Chem. Phy. 96 No. (5) 1992, 3416- 3421, IF: 3.488

Published by: American Institute of Physics,

ISSN: 0021 – 9606 E-ISSN: 1089-7690

U.G.C. Notified List S. No.- **19611**

5. Dielectric Response and Phase Transition studies of P-Azoxy Anisol and 1-1 Diacetyl Ferrocene in pure and Binary Mixtures



G.K. Johri, **M. Johri**, Nirupama Saxena and J.A. Roberts  
Mol. Mat., 1995 05, 63-67.

Published by: OPA Amsterdam B.V. Published under license by Gordon and Breach Science Publishers SA Printed in the U.S.A.

6. An Experimental Study of Acoustic Cavitation and Metal Water Interface.

G.K. Johri, A. Saxena, **M. Johri** and G. Iernetti  
Acoustic Letters 21, No. 6, 1997

Published by: Parjamon Information Service, U.K., ISSN: 0140 – 1599  
U.G.C. Notified List S.No.- **481**

7. An Experimental Study of Acoustic Cavitation and Metal–Water Interface

G.K. Johri, A. Saxena, **M. Johri** and G. Iernetti  
Acoustics Letters 21 (1997) 116-119

Published by: Parjamon Information Service, U.K., ISSN: 0140 – 1599  
U.G.C. Notified List S. No.- **481**

8. A New Relation for the Study of Molecular Interaction in Organic Liquids Influenced by an Ultrasonic Field.

Saumya Johri, **M. Johri** and G.K. Johri  
Acoustics Letters 22 (1998) 26-29.

Published by: Parjamon Information Service, U.K., ISSN: 0140 – 1599  
U.G.C. Notified List S. No. - **481**

9. The Study of Molecular Interactions in Liquids Using Temperature Variation of Ultrasonic Velocity

G.K. Johri, J. Singh, **M. Johri** and Saumya Johri

Physics and Chemistry of Liquids, 38 (2000), 509-519, IF: 1.915

Published by: Taylor and Francis, ISSN: 0031-0104 (Print) 1029-0451 (Online)  
U.G.C. Notified List S. No. - **29531**

10. Theoretical Study of Molecular Collisions and Microwave Line Width

G.K. Johri, P. Gupta and **M. Johri**

Journal of Quantitative Spectroscopy and Radiative Transfer, 66 (2000), 215-221,  
IF: 2.468

Published by: Elsevier, ISSN: 0022- 4073  
U.G.C. Notified List S. No. - **22529**

11. The Effect of Pulse Parameters on the Electrical Double Layer Influenced by a High Intensity Ultrasonic Field

A. Saxena, **M. Johri** and G. Iernetti  
Acoustic Letters, Aug. 2000. IF: 2.639  
Published by: Parjamon Information Service, U.K., ISSN: 0140 – 1599  
U.G.C. Notified List S. No. - **481**

12. Sonoluminescence Thresholds of Metal as a Function of Melting Point Temperature and Pulse Parameters

G.K. Johri, **M. Johri** and Deepa Singh  
Acoustics Letters, 24, No 4, 2000, IF: 2.639  
Published by: Parjamon Information Service, U.K., ISSN: 0140 – 1599  
U.G.C. Notified List S. No. - **481**

13. Metal Water Interface Influenced by Acoustic Cavitation

G.K. Johri, D. Singh and **M. Johri**  
Acoustic Letters 24, No. 6, 2000, IF: 2.639  
Published by: Parjamon Information Service, U.K., ISSN: 0140 – 1599  
U.G.C. Notified List S. No. - **481**

14. Dielectric and Phase Transition studies of 1MC1EPOPB Ferroelectric Liquid Crystal

G.K. Johri, Kuldeep Srivastava, **Manoj Johri**, Masonari Ozaki and Katsumi Yoshino  
Molecular Crystals and Liquid Crystals, 36, 673-681, 2001, IF: 0.896  
Published by: Taylor and Francis, U.S.A., ISSN: 1542-1406  
U.G.C. Notified List S. No. - **26447**

15. A Brief Report on Photonic Materials and Calculations using the Mechanism of Strong Localization of Light

G.K. Johri, **M. Johri**, A. Tiwari, R. Sharma and Katsumi Yoshino  
Molecular Crystals Liquid Crystals, 368, 359-367, 2001, IF: 0.896  
Published by: Taylor and Francis, U.S.A., ISSN: 1542-1406  
U.G.C. Notified List S. No. - **26447**

16. Experimental Study of Dielectric Relaxation in 4 cyano-4-n- Hexyls Biphenyl Nomadic Liquid Crystal

G.K. Johri, **Manoj Johri**, J.A. Roberts and Katsumi Yoshino  
Molecular Crystals Liquid Crystals, 367, 711-717, 2001, IF: 0.896  
Published by: Taylor and Francis, U.S.A., ISSN: 1542-1406  
U.G.C. Notified List S. No. - **26447**

17. Dielectric and phase Transition studies of IMCIEPOPB Ferroelectric Liquid Crystal

G.K. Johri, Kuldeep Srivastava, **Manoj Johri**, Masonari Ozoki and Katsumi Yoshino  
Molecular Crystals Liquid Crystals, 366, 673-681, 2001, IF: 0.896  
Published by: Taylor and Francis, U.S.A., ISSN: 1542-1406  
U.G.C. Notified List S. No. - **26447**

18. Theoretical study of temperature tuning and anisotropy of liquid crystal infiltrated synthetic opal as photonic crystal

Gajendra K. Johri, Akhilesh Tiwari, **Manoj Johri** and Katsumi Yoshino  
Japanese Journal of Applied Physics, 40, Part 1, No.7, 4565-4569, 2001, IF: 1.48  
Published by: Japan Society of Applied Physics,  
ISSN: 0021-4922 (Print) 1347&4065(web)  
U.G.C. Notified List S. No. – **18518**

19. Study of the effect of the temperature and magnetic field variation on the dielectric properties of organic liquids using a microwave cavity spectrometer

G.K. Johri, Rajesh Sharma, Akhilesh Tiwari, **M. Johri**, Saumya Saxena and James A. Roberts  
Physics and Chemistry of Liquids, 39, 711-722. 2001, IF: 1.931  
Published by: Taylor and Francis, ISSN: 0031-0104 (Print) 1029-0451 (Online)  
U.G.C. Notified List S.No.-**29531**

20. Existence of a photonic band gap and underlying physical processes

G.K. Johri, Akhilesh Tiwari, Saumya Saxena and **Manoj Johri**  
Modern Physics Letters B, 15 No 16, 529-534, 2001, IF: 0.512  
Published by: World Scientific, ISSN: 0217-9849, ISSN: 1793-6640 (Online)  
U.G.C. Notified List S.No.-**26390**

21. Study of the Dielectric Response of Aqueous Solutions of Copper Sulphate Using Microwave Cavity Spectrometer

G. K. Johri, D.C. Gupta, **M. Johri** and J.A. Roberts  
Physics and Chemistry of Liquids, 40(1) 1-7. 2002, IF: 1.931  
Published by: Taylor and Francis, ISSN: 0031-0104 (Print) 1029-0451 (Online)  
U.G.C. Notified List S.No.-**29531**

22. Optimal size for the Nan crystalline semiconductor and effective component in the quantum confinement model

G.K. Johri, Rajesh Sharma, **Manoj Johri**, Saumya Saxena, and Katsumi Yoshino  
Modern Physics Letter B, 16, No 9, 345-349, 2002, IF: 1.948  
Published by: World Scientific, ISSN: 0217-984, ISSN: 1793-6640 (Online)  
U.G.C. Notified List S. No.- **26390**

23. Measurement of the Intensity of Somoluminescence, Subharmonic generation and sound emission using pulsed ultrasonic technique

G.K. Johri, Deepa Singh, **Manoj Johri**, Saumya Saxena, Glauco Iemetti, Nikolai Dezhnov and Katsumi Yoshino

Japanese Journal of Applied Physics, 41, 5329-5331, 2002, IF: 1.48

Published by: Japan Society of Applied Physics, ISSN: 0021-4922(Print)  
1347&4065(web)

U.G.C. Notified List S.No.-**18518**

24. Dielectric and Calorimetric studies on 1BC1EPOPB Ferroelectric Liquid Crystal having a large spontaneous Polarization.

G. K. Johri, K. Srivastava, **M. Johri**, M. Ozaki and K. Yoshino

Phase Transitions, 76 No 12, 999-1005, 2003, ISSN: 0141-1595(Print)  
1029-0338 (Online)

U.G.C. Notified List S.No.-**29329**

25. Dielectric response in Dimethyl Substituted Pyridines using Microwave Cavity Spectrometer

G.K. Johri, Rajesh Sharma and **M. Johri**

IEEE Transactions on Dielectric and Electric Insulation, 10 No 1, pp 96-101, 2003  
IF: 2.931

Published by: IEEE Dielectrics and Electric Insulation, ISSN: 1070-9878

U.G.C. Notified List S. No. – **15200**

26. Measurement of permittivity and dielectric loss in 2, 4-Dimethyl substituted pyridine using Microwave Cavity Spectrometer and Time Domain Reflectometer

S. Saxena, R. Sharma, **M. Johri**, S. Johri and G.K. Johri

IEEE Transactions on Dielectric and Electrical Insulations, II No 1, 174-178, 2004  
IF: 2.931

Published by: IEEE Dielectrics and Electric Insulation, ISSN: 1070-9878

U.G.C. Notified List S. No. - **15200**

27. Measurement of Dielectric response of 1MC1EPOPB and 1BC1EPOPB Ferroelectric Liquid Crystal

K. Yoshino, M. Ozaki, K. Srivastava, **M. Johri** and G.K. Johri

IEEE transaction on Dielectrics and Electrical Insulations, II No 1, 179-183, 2004  
IF: 2.931

Published by: IEEE Dielectrics and Electric Insulation, ISSN: 1070-9878

U.G.C. Notified List S.No.-**15200**

28. Dielectric Material as Photonic crystal and Formulations of Lamb Shift using Anisotropic model,

G.K. Johri, **M. Johri**, A. Tiwari and K. Yoshino  
IEEE Transaction on Dielectric and Electrical Insulations, 11(1), 184-189, 2004  
IF: 2.931  
Published by: IEEE Dielectrics and Electric Insulation, ISSN: 1070-9878  
U.G.C. Notified List S. No. **15200**

29. Mechanism of Photonic Band Gap, Optical Properties, Tuning and Application

Akhilesh Tiwari and **Manoj Johri**  
ICTP, Preprint IC/2006/024  
Published by: UNESCO, IAEA & ICTP  
Available at: <http://www.ictp.it/pub.of> governed by UNESCO Category 1 Institute

30. Photonic Band Gap Materials: Technology, Application and Challenges

**M. Johri**, Y.A. Ahmed and T. Bezboruah  
ICTP, Preprint IC/2006/025,  
Published by: UNESCO, IAEA & ICTP  
Available at: <http://www.ictp.it/pub.off>: governed by UNESCO Category 1 Institute

31. The Low Power Miniature Neutron Source Reactors: Design, Safety and Applications

Y.A. Ahmed, I.O.B. Ewa, I. M. Umar, T. Bezboruah, **M. Johri** and E.H.K. Akaho  
ICTP Preprint IC/2006/20  
Published by: UNESCO, IAEA & ICTP Available at: <http://www.ictp.it/pub.off>:  
Governed by UNESCO Category 1 Institute

32. Left Handed Materials: A new paradigm in structured electromagnetic

**Manoj Johri** and Harihar Paudyal  
ICTP Preprint IC/2010/015,  
Published by: UNESCO, IAEA & ICTP Available at: <http://www.ictp.it/pub.off>:  
Governed by UNESCO Category 1 Institute

33. Dielectric Relaxation of Water: Theory and Experiments

Narayan Prasad Adhikari, Harihar Paudyal and **Manoj Johri**  
ICTP Preprint IC/2010/31  
Published by: UNESCO, IAEA & ICTP Available at: <http://www.ictp.it/pub.off>:  
governed by UNESCO Category 1 Institute

34. Theoretical and experimental study of hydrogen bonded liquids with water as an example

Narayan Prasad Adhikari, Harihar Paudyal, Akhilesh Tiwari and **Manoj Johri**

Journal of Molecular Liquids, 158 No2, 80-91,  
doi: 10.1016/j.molliq.2010.10.012, 158, 80-91 (2011), IF: 6.165  
Published by: Elsevier, ISSN: 0167-7322  
U.G.C. Notified List S.No.-**21734**

35. Microwave Cavity Technique to Study the Dielectric Response in 4'-n-Heptyl-4-biphenyl Nematic Liquid Crystal at 20.900GHz and 29.867GHz

Dharmendra Pratap Singh, Saumya Saxena, Sanjeev Johri, Harihar Paudyal and  
**Manoj Johri**

Journal of Measurement,  
doi.10.1016/ J.measurement2010.11.020, 44605-610 (2011), IF: 3.927  
Published by: Elsevier, ISSN: 0263-2241  
U.G.C. Notified List S.No.-**25451**

36. From Left Handed Materials to Invisible Cloak Recent Advances

Harihar Paudyal, **Manoj Johri** and Akhilesh Tiwari  
The Himalayan Physics, Vol.4, No. 4, Pg. 18-26(2013)

37. Differential Scanning Calorimetric, Polarized Light Microscopic and Impedance Spectroscopic Studies of Bicomponent Mixtures of Liquid Crystals Cholesteryl Myristate and 4-n-Decyloxy Benzoic Acid

Dharmendra P.Singh, Abhay S.Pandey , **Manoj Johri** And Ravindra Dhar  
International Journal of Engineering Science Reviews, Vol.15, Issue 01, 1501-1510  
(2015), Published by: [WWW.SCIENCE CHAMBER.COM](http://WWW.SCIENCECHAMBER.COM), ISSN: 1601-5487

38. Study of Dielectric response and thermo-dynamical properties of Pentyl Cyano Biphenyl (PCB) Liquid Crystal using Microwave Cavity Spectrometer as a Probe

**Manoj Johri**, Akhilesh Tiwari, Saumya Saxena, Sanjeev Johri, Dinesh Kumar and Dharmendra Pratap Singh  
Journal of Measurement, 166 (2020), 108156, ISSN – 208156, UGC Notified, IF-3.927

39. Dielectric Study of Cholesteryl Oleyl Carbonate Liquid crystal for Temperature Variations at 9.0 GHz using Cavity Perturbation Technique

**Manoj Johri**, Saumya saxena, sanjeev Johri, and Rajesh Sharma  
Journal of Electronic Materials (JEMS), <https://doi.org/10.1007/s11664-022-09934-8>,  
P-ISSN: 3615235, IF: 2.04  
Publisher: Springer New York LLC

40. Temperature Dependence of Dielectric properties of Cholesteric Oleyl Carbonic Liquid Crystal at 20.9 GHz.

**Manoj Johri**, Sanjeev Johri, Saumya Saxena, and Rajesh Sharma  
IEEE Transactions on Dielectric and Electrical Insulation (TDEI-0313-2022)  
(Communicated)

41. Dielectric and thermodynamic studies of n-cyano-biphenyl (nCB) liquid crystals at microwave frequency

Manoj Johri and Rajesh Sharma

Liquid Crystals, DOI:10.1080/02678292.2023.2182927, ISSN:(Print)(Online) Journal  
homepage:<https://www.tandfonline.com/loi/tlct20>, Published online:27 Feb 2023.

Publisher: Taylor & Francis

### **INTERNATIONAL PROCEEDINGS**

1. Line width and Line shift Parameters of Rotation-Vibration Transition of Linear Molecules Perturbed by Inert Gas

G.K. Johri, R.P. Rishiswar and **M. Johri**

AIP Conference Proc. USA, No. 216, P 361-362, (1990), 10<sup>th</sup> International Conference on Spectral line shapes, Austin, Texas, USA, June 25-29, 1990

2. Dielectric Properties of Organic Liquids and Liquid Crystals in Solutions in Non-Polar Solvents.

G.K. Johri, D.C. Dwivedi, S. Johri and **M. Johri**

IEEE Transaction on Electrical Insulations, Conference Record of 10<sup>th</sup> International Conference on Conduction and Breakdown in Dielectric Liquid, held at Grenoble, France, September 10 - 14, 1990.

- 3 Dielectric Response and Phase Transition Measurement of Nematic Liquid Crystals at Various Temperatures in the Frequency Range of 9.0 GHz

G.K. Johri, **M. Johri** and J.A. Roberts

IEEE Transaction on Electrical Insulations, Conference Record of the 10<sup>th</sup> International Conference on Conduction and Breakdown in Dielectric Liquid, held at Grenoble, France, September 10 - 14, 1990

4. Theoretical Study of Dielectric Relaxation Mechanism and it's Physical basis for Nematic Crystals

G.K. Johri, Nirupama Saxena and **Manoj Johri**

IEEE 11<sup>th</sup> International Conference on Conduction and Breakdown in Dielectric Liquids (ICDL), Cat No. 93, CH 3204-5, Baden Datwill, Switzerland, 19-23 July, 1993, New York, NY, USA, P 159-160 (Phy. Abs No.86613)

5. Experimental Study of Dielectric Relaxation at Microwave Frequencies.

G.K. Johri, Nirupama Saxena and **Manoj Johri**

IEEE 11<sup>th</sup> International Conference on Conduction and Breakdown in Dielectric Liquids (ICDL), Cat No. 93, CH 3204-5 Baden Datwill, Switzerland 19-23 July, 1993, New York, NY, USA, P 161-5, (Phy. Abs No.86614).

6. Study of Interactions in Aqueous Ionic Solutions of NaCl and Phase Transition in Water by the Measurement of the He-Ne Laser Light Absorption Coefficient.

G.K. Johri and **Manoj Johri**

Proceedings of SHAH Centenary International Symposium on Spectroscopy and Astrophysics, October 4-6, 1993, University of Allahabad

7. The Dielectric Relaxation Studies in Liquid Crystal

G.K. Johri, **Manoj Johri**, Rashmi Srivastava and J.A. Roberts

Proceedings of 13<sup>th</sup> International Conference on Dielectric Liquids (ICDL, 99), July 20-24, 1999, Nara Japan, Pg. 567-570, ISBN 0-7803-4759-5.

8. The Study of Molecular Properties of Dimethyl Substituted Pyridines

Gajendra K Johri, **Manoj Johri**, Saumya Johri and Jahan Singh

Proceedings of 13<sup>th</sup> International Conference on Dielectric Liquids (ICDL, 99), July 20-24, 1999, Nara Japan, Pg. 590-593, ISBN 0-7803-4759-5.

9. The study of Metal-water Interface and the Acoustic Cavitation

G.K.Johri,A.Saxena,**M.Johri** and G.Iernetti

Proceedings of 13<sup>th</sup> International conference on Dielectric Liquids (ICDL, 99), July 20-24, 1999, Nara Japan, Pg. 567-570, ISBN 0-7803-4759-5.

10. Dielectric Relaxation Mechanism in Liquid Crystals

G.K.Johri, **Manoj Johri** and Katsumi Yoshino

Proceedings of 13<sup>th</sup> International conference on Dielectric Liquids (ICDL, 99), July 20-24, 1999 Nara Japan, Pg. 567-570, ISBN 0-7803-4759-5.

11. Mechanism of Occurrence of Photonic Band Gap

G.K. Johri, Akhilesh Tiwari, **Manoj Johri**, Saumya Saxena and Katsumi Yoshino

Proceedings of Third International Conference on Electrical and Electronic Material Engineering (ICEME-2001), held at Senri Life Science Centre, Nov.30-Dec, OSAKA Japan.

J. Soc. Elect. Mat. Eng 10 No 2, (2001), PP157-158



12. The Study of Internal Quantum Efficiency and Size Dependence in Quantum Confinement Model for Photo Luminescence.

G.K. Johri, Akhilesh Tiwari, **Manoj Johri**, Saumya Saxena and Katsumi Yoshino  
Proceedings of Third International conference on Electrical and Electronic Material Engineering (ICEME-2001), held at Senri Life Science Centre, Nov 30-Dec, OSAKA Japan.  
J.Soc. Elect. Mat. Eng 10 No 2, (2001), PP159-160

13. Experimental Study of Dielectric Response in Tetrahydrofuran and 2,5-Dimethylfuran using Time Domain Reflectometer

G.K. Johri , R. Sharma, **M. Johri**, S. Saxena.  
Publication year July 7-12 2002, Page (9) 358-360, Proceedings of IEEE 14th International Conference on Dielectric Liquids, Graz (Austria), available at IEEE Xplore Library, ISBN 0-7803-7350-2

14. Study of Anomalous Lambshift using Anisotropic Model

G.K . Johri, Manoj Johri, Akhilesh Tiwari and Katsumi Yoshino  
Proceedings of IEEE 14th International Conference on Dielectric Liquids (ICDL 2002), Graz Austria, Pg. 350-353, ISBN 0-7803-7350-2 available at IEEE Xplore Library

15. Dielectric Measurement for IMCIEPOPB AND IBCIEPOPB Ferroelectric Liquid Crystal of Large Spontaneous Polarization.

G.K. Johri , **M .Johri** , K.Srivastava, M .Ozaki and K. Yoshino  
Proceedings of 14th International Conference on Dielectric Liquids (ICDL 2002), Graz Austria, Publication year 2002, Page 361-364, ISBN 0-7803-7350-2 available at IEEE Xplore Library.

16. Study of Dielectric Relaxation in 2, 4 -Dimethyl Substituted Pyridine using Microwave Cavity Spectrometer and Time Domain Reflectometer.

G.K Johri, R. Sharma, **M . Johri** , S.Johri and S. Saxena  
Proceedings of 14 th International Conference on Dielectric Liquids (ICDL 2002), Graz Austria, Page 354-357, ISBN 0-7803-7350-2 available at IEEE Xplore Libirary.

17. Dielectric Response of Binary Mixtures of Nematic and Cholestric Liquid Crystal

G.K. Johri, Rajesh Sharma, **Manoj Johri** and Kiyotoshi Yashumoto,  
Proceedings of 7<sup>th</sup> International Conference on Properties and Applications of Dielectric Material (ICPADM 2003), held at Nagoya, Japan, June

## **NATIONAL**

1. Theoretical Formulation of the Interaction Energy using Irreducible Tensor Operator and the Cross-sections for the Asymmetric Top Molecule.

G.K.Johri and **Manoj Johri**

Indian Journal of Pure and Applied Physics, 1994, 32, 201-215.

IF: 0.846, CJCR 2015

Published by: Scientific Publishers, ISSN 0975- 1041 00195596

U.G.C. Notified List S. No.- **121**

2. Study of Interference of light using Newton's Rings – A New Approach

**Manoj Johri**

Bull IAPT Sept. 1996

3. Theoretical study of relative width of photonic band gap for the 3-D dielectric structure.

G.K. Johri, Akhilesh Tiwari, Saumya Saxena, Rajesh Sharma, Kuldeep Srivastava and **Manoj Johri**.

PRAMANA– Journal of Physics, **58** No. 1, (Jan. 2002), IF: 2.699

Published by: Indian Academy of Sciences and Springer, ISSN 0304- 4289(Print)  
0973-7111(online)

U.G.C. Notified List S. No.- **30170**

4. Experimental Study of Organic Liquids in Solution in Polar Solvents using Ultrasonic Technique

G.K. Johri, C.K. Srivastava, **Manoj Johri**, D.C. Dwivedi, Sanjay Kumar, D.C. Gupta, Sanjeev Johri, Saumya Saxena and Rajesh Sharma

Journal of Pure and Applied Ultrasonic, **24** No 2 Pg 61, 2002

Published by: Ultrasonic Society of India, ISSN: 0256-4637

U.G.C. Notified List S. No. - **22517**

5. Photonic Band Gap Materials: Technology, Application and Challenges

**M. Johri**, Y.A. Ahmed and T. Bezboruah

Current Science **10** No.5 May 2007, IF: 1.102

Published by: Indian Academy Of Science, ISSN: 0011-3891

U.G.C. Notified List S. No. -**40**

6. Dielectric Relaxation Mechanism in 4'-n- Heptyl-4-Biphenyl and 4-Cyano-4'-n Alkylbiphenyl Nematic Liquid Crystal at 9 GHz Using Microwave Cavity Spectrometer

**Manoj Johri**, Abhay Saxena, S. Johri and D.P. Singh,  
Jour.PAS, 15, Physical Science, 176-183, 2009  
Published by: Purvanchal Academy of Science, ISSN: 0972-3498

7. Study of the Technological Importance and Application of Liquid Crystal

A. Saxena, **Manoj Johri** and R.S. Yadav  
Jour. PAS, 16, Physical Science, 2010.  
Published by: Purvanchal Academy of Science, ISSN: 0972-3498

8. Comparative Study of an Assortment of water samples of Kanpur Region using ultrasonic Interferometer.

Abhay Saxena, Sanjay Kumar Sharma and **Manoj Johri**  
SciTech, Vol. 5, No2, 37-41, (2010)  
Published by: ISSN: 0974-052

9. Dielectric Relaxation Studies n5CB Nematic Liquid Crystal at 9GHz under the Influence of External Magnetic Field using Microwave Cavity Spectrometer

**Manoj Johri**, Abhay Saxena, S.Johri and D.P. Singh  
Pramana – Journal of Physics, vol. 76, No.4, 621-628 (2011), IF: 2.699  
Published by: Indian Academy of Science and Springer, ISSN: 0304-4289  
U.G.C. Notified List S. No. - **30170**

## **PROCEEDINGS**

1. Dielectric Response In Binary Mixtures of Lutidine using Microwave Cavity Spectrometer.

G.K. Johri, **M.Johri** and Rajesh Sharma  
Publication of 2001, Pages 104-114

Proceeding of National Conference on Emerging trends and Advances in Microwave Measurement and Techniques. March 2-3, 2001

Published by Department of Physics, Dr. Baba Saheb Ambedkar Marath Wada University, Allahabad, India

2. Ultrasonic Measurement of Alcohols and Amines in Pure States and their Solutions in Polar Organic Solutions.

G.K. Johri, D.C. Dwivedi, Sanjay Kumar, **M\_Johri**, D.C. Gupta and S.Johri

Publication year 2001, Pages 95-98

Proceedings of 10<sup>th</sup> National Symposium on Ultrasonic, March 15-16, 2001 Published by Ultrasonic Society of India.

3. The Study of Negative Refractive Index Meta-materials in the Presence of Nanophotonics,

Akhilesh Tiwari, Jean-Pierre Fontaine and **Manoj Johri**

Proceedings of 2<sup>nd</sup> National Conference on Nanomaterials and Nanotechnology, NATCON NAMTECH, ISBN 978-93-80043-61-6, Pg. 291-293, 2009

4. Metamaterials: Lycurgus Cup to Three Dimensional Cloaking

Harihar Paudyal , Saumya Saxena, Rishi Verma and **Manoj Johri**

Proceedings of National Conference Advancement of Nano Materials and its Applications, PoD, 107, Feb. 15-16, 2011

5. Left hande Material:- Technology, Application and Challenges

**Manoj Johri** and Harihar Paudyal

Proceedings of National Seminar on Nano Science and Nano Biotechnology

Sponsored by: Department of Higher Education Government of Uttar Pradesh, Lucknow, Feb. 25-26, 2017, Department of Physics, D.A-V. College, Kanpur, U.P., Affiliated to CSJM University, Kanpur, ISBN: 978-81-923572-9-4

Pg. 11-16, Published by: Samvet Publication, Kanpur

### **Internal Report**

1. Solar Energy and Irrigation in the Arid Regions of Northern Cameroon.  
Hamandjoda O. Haman- Djalo and **Johri M.**

ICTP preprint IC/IR/2006/002

2. The Behavior of Evanescent Wave in Meta-Materials having Negative Permittivity and Negative Permeability

**Manoj Johri** and Akhilesh Tiwari

ICTP Internal report IC/IR/2010/05.

**Conference /Workshop Research Papers/ Abstracts /Attended/ Presented by  
Dr. Manoj Johri and Co-Authors**

**INTERNATIONAL**

1. Line Width and Line Shift Parameters of Rotation-Vibration Transition of Linear Molecules Perturbed by Inert Gas.

G.K. Johri, R.P. Rishiswar and **M.Johri**

AIP Conference Proc. USA No. 216, P, 361-362 (1990), 10<sup>th</sup> International Conference on Spectral line shapes June 25-29, 1990, Austin, Texas, USA

2. Dielectric Response of Select Ionic Solutions Using a Loaded Microwave Cavity Operating 9, 21 and 29 GHz as a Probe.

G.K. Johri, **M. Johri** and J.A. Roberts

Presented at the 25<sup>th</sup> Microwave Power Symposium, August 27-29, 1990, Denver, Colorado, USA

3. An Experimental Study of Collisional Broadening of the Rotational Components J-21, K=0, of the CH<sub>3</sub>CN Molecule in the, N<sup>o</sup> 1 and 2 Vibrations

**M.Johri**, G.K. Johri and J.A. Roberts

Presented at 37<sup>th</sup> Annual General Meeting of the American Association of Physics Teachers, Sponsored by American Physical Society November 9-10, 1990, Texas City, Texas, USA,

4. A Study of the Line Shape of the Collisionally Broadened Rotational Components J=2-1, K=1 of the CH<sub>3</sub>CN Molecule in the (n=0,1,2) Vibrations

**M.Johri**, G.K. Johri and J.A. Roberts

Presented at 37<sup>th</sup> Annual General Meeting of the American Association of Physics Teachers, Sponsored by American Physical Society, November 9-10, 1990, Texas City, Texas, USA

5. Study of Interactions in Aqueous Ionic Solutions of NaCl and Phase Transition in Water by the Measurement of the He-Ne Laser Light Absorption Coefficient

G.K. Johri and **Manoj Johri**

Presented at SHAH CENTENARY INTERNATIONAL SYMPOSIUM ON Spectroscopy and Astrophysics, held on October 4-6, 1993, University of Allahabad

6. The Study of Associated Behavior for Organic Liquid using Ultrasonic Velocity Data

G.K. Johri, S. Johri, **M. Johri** and C.K. Srivastava

Presented at 3<sup>rd</sup> International/15<sup>th</sup> National Symposium on Recent Trends in Life Science, Feb. 11-13, 1999 at Department of Zoology, Bangalore University, Bangalore, India

7. Experimental Study of Dielectric Relaxation in 4-cyano-4-n-hexyl Biphenyl Nematic Liquid Crystal

Gajendra K. Johri, **Manoj Johri** and J.A. Roberts

Presented at 18<sup>th</sup> International Liquid Crystal Conference July 24-28, 2000 Sendai, Japan.

8. Dielectric and Phase Transition Studies of 1MC1EPOPB Ferroelectric Liquid Crystal

Gajendra K. Johri, Kuldeep Srivastava, **Manoj Johri** and Katsumi Yoshino

Presented at 18<sup>th</sup> International Liquid Crystal Conference July 24-28, 2000, Sendai, Japan

9. A Brief Report on Photonic Crystals and Calculations Using the Mechanism of Strong Localization

Gajendra K Johri, **Manoj Johri**, Akhilesh Tiwari, Rajesh Sharma and Katsumi Yoshino

Presented at 18<sup>th</sup> International Liquid Crystal Conference July 24-28, 2000, Sendai, Japan

10. Berthelot-Type Anomalous Temperature Dependence and Quantum Confinement Model for Photoluminescence

G.K. Johri, Rajesh Sharma, **M. Johri** and Saumya Saxena

Presented at The Second Stig Lundqviste Research Conference on the Advancing Frontiers of Condensed Matter Physics: "Non-Conventional Systems and New Directions" 2 - 6 July, 2001, Mira mare Trieste, Italy.

11. Mechanism of Occurrence of Photonic Band Gap

G. K. Johri, Akhilesh Tiwari, **Manoj Johri**, Saumya Saxena and Katsumi Yoshino

Presented at the 3<sup>rd</sup> International Conference on Electrical and Electronic Material Engineering in Osaka University, on Nov'30 and Dec'1 2001, Japan

12. The Study of Internal Quantum Efficiency and Size Dependence in Quantum Confinement Model for Photoluminescence

G.K. Johri, **M. Johri**, Rajesh Sharma and K. Yoshino

Presented at the 3<sup>rd</sup> International Conference on Electrical and Electronic Material Engineering in Osaka University, on Nov'30 and Dec'1 2001, Japan.

13. Study of Anomalous Lamb Shift using Anisotropic Model

G.K. Johri, **Manoj Johri**, Akhilesh Tiwari and Katsumi Yoshino

Presented in 14<sup>th</sup> International Conference on Dielectric Liquids (ICDL 2002) held at Technical University Graz, from July 7 –12, 2002, Austria

14. Dielectric Measurement for 1MC1EPOPB and 1BC1EPOPB Ferroelectric Liquid Crystals of Large Spontaneous Polarization

G.K. Johri, **M. Johri** K. Srivastava, M. Ozaki, K. Yoshino

Presented in 14<sup>th</sup> International Conference on Dielectric Liquids (ICDL 2002) held at Technical University Graz, from July 7 –12, 2002, Austria

15. Study of Dielectric Relaxation in 2,5-Dimethyl Substituted Pyridine using Microwave Cavity Spectrometer and Time Domain Reflectometer

G.K. Johri, R. Sharma, **M. Johri**, S. Johri and S. Saxena

Presented in 14<sup>th</sup> International Conference on Dielectric Liquids (ICDL 2002) held at Technical University Graz, from July 7 –12, 2002, Austria

16. Experimental Study of Dielectric Response in Tetrahydrofuran and 2,5-Dimethylfuran using Time Domain Reflectometer

G.K. Johri, R. Sharma, **M. Johri** and S. Saxena

Presented in 14<sup>th</sup> International Conference on Dielectric Liquids (ICDL 2002) held at Technical University Graz, from July 7–12, 2002, Austria

17. Photonic Band Gap and It's Physical Basis

G.K. Johri, Akhilesh Tiwari and **Manoj Johri**

3<sup>rd</sup> International Wilhelm and Else Haraeus Summer School on "Photonic crystals Optical Materials for the 21<sup>st</sup> Century held at Lutherstadt from July 14-25, 2002, Wittenberg, Germany

18. Dielectric Response of Binary Mixtures of Nematic and Cholestric Liquid Crystal

G.K. Johri, Rajesh Sharma, **Manoj Johri** and Kiyotoshi Yashumoto

Presented at 7<sup>th</sup> International Conference on Properties and Applications of Dielectric Material (ICPADM 2003) held at from June 1–5, 2003. Nagoya, Japan

19. Study of 3-Dimensional Photonic Band Gap and its Tuning by Changing Temperature and Anisotropic Behavior

Akhilesh Tiwari and **Manoj Johri**

Presented at the Conference “Photonic Crystal Down Under” held from August 18-24, 2002, Australian National University, Canberra, Australia

20. A Fictitious Business Plan on “Automatic Grill”

**Manoj Johri** , Ekardo, Ali, etal.

Presented at Workshop on Entrepreneurship for Physicist and Engineers from Developing Countries, 3-7 May, 2010, Mira Mare, Trieste, Italy

20. Thermodynamical Optical and Electrical Properties of Bi-component Mixture of Liquid Crystals: Cholesteryl Benzoate and 4-n- Dodecyloxy Benzoic Acid

Dharmendra P. Singh, **Manoj Johri** , Abhay S.Pandey and Ravindra Dhar

Presented at International Conference on Advanced Materials and Applications (ICAMA-14), March 24-26, 2014, Centre of Material Sciences, University of Allahabad, India

**NATIONAL**

1. Molecular Structure of Isotopic ally Substituted Methyl Cyanide of  $C_3V$  Symmetry

G.K. Johri, P. Gupta, **M. Johri**, M. Al. Share and J. A. Roberts

Presented at the 61<sup>st</sup> Annual Session of the National Academy of Sciences, India held at Meerut, India December 19-21, 1991

2. On Calculation of Dielectric Properties of Cholesteryl Oleate Liquid Crystal

Presented at Prof. M.N. Shah Birthday Centenary Session, Udaipur in 62<sup>nd</sup> Annual Session of National Academy of Sciences, India, February 9-11, 1993

3. Theoretical Study of Permittivity in the Gas Phase at Microwave Frequencies

G.K. Johri, **Manoj Johri** and Sanjeev Srivastava



Presented at Prof. M.N. Shah Birthday Centenary Session, Udaipur in 62<sup>nd</sup> Annual Session of National Academy of Sciences, India, February 9-11, 1993

4. Experimental Study of Microwave Interaction with Varying Concentrations of Aqueous Ionic Solutions of NaCl CuSO<sub>4</sub>

G.K. Johri, Nirupama Saxena and **M. Johri**

Presented at National Symposium on Advances in Microwaves, held at University of Delhi South Campus, March, 1-2, 1993

5. Long Time Relaxation in Nematic and Cholesteryl Liquid Crystals using Density Matrix Approach.

G.K. Johri, **Manoj Johri** and Nirupama Saxena

Presented at National Seminar on Liquid Crystal, Department of Studies in Physics, Mysore University, Mysore, October 18-20, 1993

6. Strength of Interaction in Liquid Crystals.

G.K. Johri, **Manoj Johri** and Nirupama Saxena

Presented at Solid State Physics Symposium, BARC, Bombay, Dec. 27-31, 1993

7. On the Calculation of Dielectric Properties of Cholesteryl Oleate Liquid Crystal.

G.K. Johri, D.C. Dwivedi, S. Johri, **M. Johri** and Nirupama Saxena

62<sup>nd</sup> Annual Session of National Academy of Sciences Udaipur, February 1993

8. An Experimental Study and Phase Transitions for Nematic Liquid Crystal and their Binary Mixtures

G.K. Johri, **Manoj Johri** and Nirupama Saxena

63<sup>rd</sup> Annual Session of National Academy of Sciences Bangalore, Nov. 24-26, 1993

9. Dielectric Relaxation Studies in Nematic Liquid Crystal.

G.K. Johri, **Manoj Johri** and Nirupama Saxena

Presented at Annual Session of Indian Liquid Crystal Society, held in the month of October at the University of Vadodara, Vadodara (Gujarat), 1995

10. Dielectric Relaxation and Molecular Interaction for Tetra Hydrofuran in Pure and in Solution in Non-polar Solvents at Microwave Frequencies

G.K. Johri, **M. Johri**, Suresh Chandra, N.K. Narain and Raghubar Singh

Presented at 67<sup>th</sup> Annual Session of the National Academy of Sciences, held at Utkal University, Bhubaneswar, from Oct. 24-26, 1997

11. Role of Professional Instructions in Higher Education in the Areas of Electronics Telecommunication and Information Technology held on 17<sup>th</sup> Jan. 1999 at I.I.T. Kanpur

12. The Study of Nematic Liquid Crystal using Microwave Cavity Spectrometer.

G.K. Johri, **M. Johri**, S. Johri and K. Srivastava

Presented at 7<sup>th</sup> National Seminar on Liquid Crystal, held at Mangalore University, Mangalore, 11-13, 1999

13. Strongly Scattering Dielectric Microstructures (Invited Paper)

G.K. Johri, **M. Johri**, K. Srivastava, R. Sharma and A. Tiwari

Presented at National Symposium on Advances in Microwaves and Light waves from March 25-28, 2000 at University of Delhi, South Campus, New Delhi

14. Experimental Study of Dielectric Response of Ionic Solutions at Microwave Frequencies

G.K. Johri, D.C. Gupta, K. Srivastava and **M. Johri**

Presented at National Symposium on Advances in Microwaves and Light waves from March 25-28, 2000 at University of Delhi, South Campus, New Delhi

15. New Methodology of Analysis for Ultrasonic Velocity Data for 2-4, 2-6, 3-4 And 3-5 Lutidines

G.K. Johri, C.K. Srivastava, Jahan Singh, **Manoj Johri**, Sanjeev Johri, Kuldeep Srivastava and Saumya Saxena

Presented in Annual Session of National Academy of Sciences 2000 held at Allahabad.

16. Theoretical Study of Photonic Band Gap

G.K. Johri, **M. Johri**, K. Srivastava, R. Sharma and A. Tiwari

Presented in Annual Session of National Academy of Sciences 2000 held at Allahabad.

17. Ultrasonic Measurement of Alcohol's and Amines in Pure States and their Solutions in Polar Organic Solvents

G.K. Johri, D.C. Dwivedi, Sanjay Kumar, **M. Johri** D.C. Gupta and S. Johri

Presented in 10<sup>th</sup> National Symposium on Ultrasonic (X-NSU) (Oct., 2000)

18. Experimental Study of Tetrahydrofuran in Solution in Non-polar Solvents using Ultrasonic Technique LP-9

G.K. Johri, J. Singh, Sanjay Kumar, **M. Johri**, D.C. Gupta and S. Saxena  
Presented in 10<sup>th</sup> National symposium on Ultrasonic (X-NSU) (Mar 15-16., 2001),  
Department of physics Osmania University, Hyderabad, India

19. Theoretical Study of Ultrasonic Properties LP-41

Saumya Saxena, J. Singh, R. Sharma, **M. Johri** and C.K. Srivastava  
Presented in 10<sup>th</sup> National symposium on Ultrasonic (X-NSU), Department of physics  
Osmania University, Hyderabad, (March 15-16, 2001)

20. Determination of the Lattice Size of the Photonic Crystal Infiltrated with ZLI-1132  
Nematic Liquid Crystal

G.K. Johri, A. Tiwari, R. Sharma, K. Srivastava, and **M. Johri** and Katsumi Yoshino  
Presented in 88<sup>th</sup> Session of Indian Science Congress Association, New Delhi (3-7,  
Jan., 2001)

21. Study of ultrasonic velocity and its calculation in solution

G.K. Johri, Sanjay Kumar, **Manoj Johri**  
Presented at 88<sup>th</sup> Session of Indian Science Congress Association, New Delhi (3-7,  
Jan., 2001)

22. Mechanisms for Photonic Band Gap

G.K. Johri, Akhilesh Tiwari and **Manoj Johri**  
Presented in National Conference on “Emerging Trends and Advances in Microwave  
Measurements and Techniques” (NCMMT) held at Dept. of Physics, Dr. B.A.M.U.  
Aurangabad, March 2-3, 2001

23. Dielectric response in Binary Mixtures of lutidines Using Microwave Cavity  
Spectrometer

G.K. Johri, **M. Johri** and Rajesh Sharma  
Presented in National Conference on “Emerging Trends and Advances in Microwave  
Measurements and Techniques” (NCMMT) held at Dept. of Physics, Dr. B.A.M.U.  
Aurangabad, March 2-3, 2001

24. Mechanism for Appearance of Photonic Band Gap and Infiltrated Synthetic Opal as  
Photonic Crystal

G. K. Johri, Akhilesh Tiwari, **Manoj Johri** and Saumya Saxena  
Presented at The Second Stig Lindquist Research Conference on the Advancing  
Frontiers of Condensed Matter Physics: "Non-Conventional Systems and New  
Directions" 2 - 6 July 2001, Mira mare Trieste, Italy

25. Photonic Crystal: An Alternative Tool of Semiconductor

G.K. Johri, **M. Johri** and Akhilesh Tiwari

Presented at the National Conference of Vigyan Bharti, held at NPL, IARI Campus, New Delhi on 14-15 Dec' 2001.

26. Porous Silicon Nanocrystallite: A New Trend in Electronics

G. K. Johri, **Manoj Johri** and Rajesh Sharma

Presented at the National Conference of Vigyan Bharti, held at NPL, IARI Campus, New Delhi on 14-15 Dec'2001

27. An Experimental Study of Dielectric Response of Organic Liquid using Microwave Cavity Spectrometer and Time Domain Reflectometer

**Manoj Johri**, Akhilesh Tiwari and Rajesh Sharma

Presented at 89<sup>th</sup> Session of Indian Science Congress Association, Lucknow (Jan. 3-7, 2002)

28. Mechanism of Photonic Band Gap and Band Structure Calculations

G.K. Johri, Akhilesh Tiwari and **Manoj Johri**

Presented in National Seminar on "Challenges in Physics in New Millennium" held at D.A-V. College, Kanpur, India from December 13-14, 2002

29. Photonics Technique a Challenge in 21<sup>st</sup> Century in Defiance

G. K. Johri, Akhilesh Tiwari and **Manoj Johri**

Presented at "All India Rajbhasha Scientific and Technical Seminar" held at Defence Materials and Stores Research and Development Establishment (DMSRDE), DRDO, Kanpur on 23<sup>rd</sup> January, 2003

30. A Possibility to Control Light and Photonic Information Technology in 21<sup>st</sup> century: a Goal

G. K. Johri, Akhilesh Tiwari and **Manoj Johri**

Presented at "Annual Photonics Workshop-2003" held at International School of Photonics, Cochin University of Science and Technology (CUSAT), Cochin, India from February 27-28, 2003

31. Photonic Band Gap Materials : a Semiconductor for Light

Akhilesh Tiwari and **Manoj Johri**

Presented at National Seminar on "Current Trends in Condensed matter Physics" held at Dept. of Physics, D.B.S. College, Kanpur, India from 19-20 Nov. 2004

32. Dielectric Relaxation Mechanism in 1MC1EPOPB and 1BC1EPOPB Ferroelectric Liquid Crystals at the Middle Temperatures of Different Sematic Phases

**Manoj Johri**

Presented at National Seminar on “Emerging Trends in Physics in 21<sup>st</sup> Century” held at Dept. of Physics, D.B.S. College, Kanpur, India, 10<sup>th</sup> Dec., 2006

33. Study of Dielectric Contrast in Fabrication of Semiconductor of Light and Tuning of the Photonic Band Gap

Akhilesh Tiwari and **Manoj Johri**

Presented at National Seminar on “Emerging Trends in Physics in 21<sup>st</sup> Century” held at Dept. of Physics, D.B.S. College, Kanpur, India, 10<sup>th</sup> Dec., 2006

34. Optical Properties, Tuning, Applications and Mechanism of Photonic Band Gap

**Manoj Johri**, Akhilesh Tiwari, and Sanjeev Johri

Presented at National Seminar on “Emerging Trends in Physics in 21<sup>st</sup> Century” held at Dept. of Physics, D.B.S. College, Kanpur, India, 10<sup>th</sup> Dec., 2006

35. Theoretical Study of Molecular Interaction Potential in Liquids and Gases

Sanjeev Johri, Akhilesh Tiwari and **Manoj Johri**

Presented in National Seminar on “Emerging Trends in Physics in 21<sup>st</sup> Century” held at Dept. of Physics, D.B.S. College, Kanpur, India, 10<sup>th</sup> Dec. 2006

36. Conformational Changer in Certain Protein of m. Leprae Dining Exponential Growth

**M. Johri** and Ravindra Swarup Singh

Presented at 25<sup>th</sup> Biennial Conference of the India Association of Heprologist held at Institute of Life Sciences, Chatrapati Shahuji Maharaj University, Kanpur, Nov 19<sup>th</sup> - 21<sup>st</sup> 2007

37. Contamination in Water of Different Sources at Kanpur

**M. Johri** and A. Saxena

Presented at National Seminar on combating pollution to create a Healthier planet held at Dayanand Girls College, Civil lines, Kanpur, Dec. 10-12-2007 .

38. Optical properties, tuning of photonic band gap material

**Manoj Johri**, Sanjeev Johri, Saumya \* and Rajeev Kumar, Dept. of Physics, DAV College, Kanpur U.P., Presented at 17<sup>th</sup> Annual Conference of PAS, Feb 19-20, 2008, K.S. Saket P.G. College, Ayodhya, Faizabad, U.P.

39. Acute Toxicity & Behavioral Changes in Fresh Water Fish *Mystus Vittatus* (Bloch) Exposed to Ammonium Sulphate

Preeti Saxena, **Manoj Johri\*** and P.K. Mathur, Cytogenetics Lab, Dept. of Zoology, \*Dept. of Physics, DAV College, Kanpur  
Presented at Scientific and legal challenges of global warming, organized by BND College, Kanpur, Feb 25-26, 2008

40. Dielectric Relaxation Mechanism in IMCIEPOPB and IBCIEPOPB Ferroelectric Liquid Crystals at the Middle Temperatures of Different Sematic Phases

**Manoj Johri**, Saumya Saxena, Sanjeev Johri and D.P. Singh  
16<sup>th</sup> National Conference on Liquid Crystals Oct 26-28, 2009 held at University of Lucknow, Lucknow

41. The Non Resonant Absorption Study of Cholesteryl Oleyl Carbonate using Microwave Cavity Spectrometer at 9.00 GHz and 20.90 GHz

**Manoj Johri**, Anurag Saxena, R.S. Yadav and Abhay Saxena

16<sup>th</sup> National Conference on Liquid Crystals Oct 26-28, 2009 held at University of Lucknow, Lucknow

42. Microwave Cavity Technique to Study the Dielectric Response in 4-n- heptyl-4 Biphenyl Nematic Liquid Crystals at 20.9 GHz and 29.867 GHz

**Manoj Johri**, S.Johri, Saumya Saxena and D.P. Singh

3<sup>rd</sup> National Seminar on "Spectroscopy and Its Relevance to Various Fields of Science, held at Dayanand Girls (P.G) College, Kanpur Nov. 19-20, 2009

43. The Study of Negative Refractive Index Metamaterials in the Presence of Nano-Photonics

Akhilesh Tiwari, Jean –Pierre Fontaine and **Manoj Johri**  
Presented at 2<sup>nd</sup> National Conference on Nanomaterials and Nanotechnology, Held at University of Lucknow, Dec. 21-23, 2009

44. Microwave Cavity Technique to study the Dielectric Response in 4n-Heptyl-4-Biphenyl Nematic Liquid Crystal at 20.900GHz. and 29.867GHz.

Dharmendra Pratap Singh, Saumya Saxena, Sanjeev Johri, Harihar Paudyal and **Manoj Johri**  
Presented at 17 National Conference on Liquid Crystals held at VNGSU, Surat, Gujrat Nov.15-17, 2010.

45. The Behavior of Evanescent Wave in Metamaterials having Negative Permittivity and Negative Permeability

**Manoj Johri** and Akhilesh Tiwari.

Presented at 17 National Conference on Liquid Crystals held at VNGSU, Surat, Gujrat Nov.15-17,2010.

46. Metamaterials: Lycurgus Cup to Three Dimensional Cloaking

Harihar Paudyal, Saumya Saksena, Rishi Verma and **Manoj Johri**

Presented at National Conference on Advancement of Nano Materials & Its Application, D.A-V. College, Kanpur, Feb. 15-16, 2011

47. Transmission of Evanescent Wave in the Presence of Negative Refractive-Index Metamaterials

Akhillesh Tiwari, **Manoj Johri** and Jean-Pierre Fontaine

Presented at National Conference on Advancement of Nano Materials & Its Application, D.A-V. College, Kanpur, Feb. 15-16, 2011

48. Interaction of Near Field Standing Wave with Metamaterials

Akhilesh Tiwari and **Manoj Johri**

Presented at National Conference on Advancement of Nano Materials & Its Application, D.A-V. College, Kanpur, Feb. 15-16, 2011

49. Study of Dielectric Response and Thermodynamical Properties of Pentyl Cyano Diphenyl(5CB) Liquid Crystal using a Resonant Microwave Cavity as a Probe

Dharmendra P.Singh, **Manoj Johri**, Saumya Saxena, Sanjeev Johri, Abhay S. Pandey and Ravindra Dhar

21<sup>st</sup> National Conference on Liquid Crystals NCLC- 2014 November 10-12, 2014 Department of Physics, Vikramajit Singh Sanatan Dharm College, C.S.J.M. University, Kanpur-208002

50. Differential Scanning Calorimetric, Polarized Light Microscopic and Impedance Spectroscopic Studies of Bicomponent Mixtures of Liquid Crystals: Cholesteryl Benzoate and 4-n- Dodecyloxy Benzoic Acid.

Dharmendra P. Singh, **Manoj Johri** , Abhay S. Pandey and Ravindra Dhar

21<sup>st</sup> National Conference on Liquid Crystals NCLC- 2014 November 10-12, 2014 Department of Physics Vikramajit Singh Sanatan Dharm College, C.S.J.M. University, Kanpur-208002

51. Cavity Perturbation Equations and the Dielectric Response of Gases, liquids and the Solids.

**Manoj Johri**

Presented at National Seminar on Nano Science and Nano Biotechnology (Sponsored by Department of Higher Education, Government of Uttar Pradesh, Lucknow)  
Feb. 25-26, 2017, Department of Physics, D.A-V. College, Kanpur ( U.P.) Affiliated to CSJM University, Kanpur

52. Dielectric Properties and Phase Transition Study of the Cholestric oleate Carbonate (Choc) Liquid Crystal under the Influence of an Applied External Magnetic field using a Microwave Cavity Spectrometer

**Manoj Johri, Saumya Saxena and J.A. Roberts**

Presented at National Seminar on Nano Science and Nano Biotechnology Sponsored by Department of Higher Education Government of Uttar Pradesh, Lucknow, Feb. 25-26, 2017, Department of Physics, D.A-V. College, Kanpur, Affiliated to CSJM University, Kanpur, U.P.

53. Photonic Crystals for Bio-Nano-Sensors

Akhilesh Tiwari, Komal Sharma, **Manoj Johri**

Presented at National Seminar on Nano Science and Nano Biotechnology  
Sponsored by Department of Higher Education Government of Uttar Pradesh, Lucknow, Feb. 25-26, 2017, Department of Physics, D.A-V. College, Kanpur  
Affiliated to CSJM University, Kanpur, Uttar Pradesh

54. Volume Dependence Study of Dielectric Properties of Nematic Liquid Crystal at Microwave Frequency

Saumya Saxena, Sanjeev Johri, Manoj Johri and Rajesh Sharma

9<sup>th</sup> IEEE UP Section Conference on Electrical, Computer and Electronics, 2-4 December, 2022, IIIT Allahabad  
Sponsored by UP CON, IEEE UP Section (India)



**Prof Manoj Johri**  
**Department of Physics & Electronics**  
**D.A-V.College Kanpur**



**Details Of Other Credential, Significant Contributions, Awards Received Etc.**

S. No	Details (Mention Year, Value etc. where relevant)
1	<p><b>HONORS &amp; AWARDS:-</b> Obtained <b>First positions and Gold Medal</b> in 1989 from Kanpur University. (2) Junior Associate of the Abdus Salam International center for Theoretical Physics (ICTP), Trieste, Italy from 1 January 2003 until 31 December 2010 (3) Robert A-Welch Foundation Pre doctoral fellowship , University of North Texas, Denton Texas 1 jan1990 – Dec.1990.(4) Teaching Assistantship from Department of Physics , University of North Texas, Denton Texas (5) Invited to collaborate in field of research from Institute of Applied Physics Byelorussian Academy of Sciences 16, F. Skorina str., Minsk.220072,USSR(6) Invited for Post doctoral research Dipartimento Di Fisica Universita di Pisa Piazza Torricelli,2</p>
2	<p><b>SUMMER SCHOOL COURSE WORKSHOP AND PROJECTS:-</b> (1) Electronics projects in M. Sc. and setup experiments in M.Sc. Laboratory. The project fabricated was judged to be the best in the college Lab. (2) Summer Project at Nuclear Science Centre, New Delhi (July 15-27, 1991)</p> <p>(3) Research Project under the Pre-Doctoral Robert A Welch Foundation Fellowships at the Dept. of Physics, University of North Texas, U.S.A. (4) Visited IUCAA, Pune, India from June 19 to June 30, 1996, under Visitor programme of the centre.(5) Attended First Refresher course on Recent Trends in Physics Udai Pratap College (Autonomous Institution) Varanasi – 221002 from Dec. 26,1996 to Jan. 9,1997. (6) Attended workshop on Modeling, Design and Characterization of Microelectronic Devices from Mar25-26, 2000 at University of Delhi, South Campus New Delhi.</p> <p>(7) Participated in UNESCO Regional Training Course for University/College Teachers in “Fibre Optics” from Feb, 12-24, 2001 at I.I.T. Kharagpur.(8) Participated in technical meeting on “Analytical Methods for characterization of hot particles and their Impact on environment 6-10 Mar 2006 Trieste ITALY (9) Participated in spring school on super string theory and related topics held at Abdus salam ICTP, Trieste Italy 27 march to 4 April 2006. (10) Participated in XXIV Annual Convention of IAPT held at C.S.J.M. University, Kanpur from October 10-12, 2009.</p> <p>(11) “School on Synchrotron and Free-electron-Laser Sources and their multidisciplinary Applications” held at Abdus salam ICTP, Trieste Italy 26 April-7 May 2010; (12) “Workshop on Entrepreneurship for Physicists and Engineers from Developing Countries” held at Abdus salam ICTP, Trieste Italy 3-7 may 2010.(13) “Spring College on Computational Nanoscience” held at Abdus salam ICTP, Trieste Italy 17-28 May 2010</p>
3	<p><b>FOREIGN VISIT:-</b> (1) Physics Deptt. <b>University of North Texas, USA</b> from November 26, 1989 to February 2, 1991 (2) Department of Electronic Engg. <b>OSAKA University, Japan</b> as guest scientist from June 21, 2000 to July 21, 2000.(3) Department of Electrical Engineering, <b>Nagoya University, Nagoya, Japan</b> from 1- 7 June 2003. (4) <b>Abdus Salam ICTP, TRIESTE, ITALY</b>, March1- APRIL15 2006 (5) <b>Abdus Salam ICTP, TRIESTE, ITALY</b>, March 20- June15 2010.</p>
4	<p><b>Significant research contributions :-</b> Resonant absorption in gases and non-resonant absorption in organic liquids and Liquid crystals at microwave Frequencies is one of the main area of my research. Further I have studied photonic band gap and its mechanism as a function of filling fraction and refractive Index contrast along with the calculation of the relative width and devised a theory for the tuning of the Photonic band gap by</p>

	<p>varying temperature and anisotropy and proposed a theory for the mechanism of occurrence of photonic band gap and to minimize the refractive index contrast to search a new material, I have chaired sessions in National conferences. Apart from this our research group have presented about 50 research papers in various International and National conference/ workshop symposium whose list is appended herewith for your perusal.</p>
5	<p><b>Special contributions to teaching, promotion and management of science.:-</b> Since the beginning of the career I am continuously engaged in introducing several professional and vocational courses at my institute some of these are instrumentation, information technology, biotechnology, etc. I am successful in getting funding from U.G.C. to run some of these courses. I am managing these courses in the capacity of honorary Director of these courses. Further I am consultant Advisor in the U.G.C. scheme of Innovative Instrumental techniques and there Application, the Vice-Chancellor of C.S.J.M. UNIVERSITY nominated me as Member Board of studies for Unified syllabus in B.Sc. Electronics and Instrumentation. Further I Participated in training programme on Right to information Act 2005 held at Deendayal Upadhyay State Institute of Rural development, U.P. Baskshi-ka Talab, Lucknow, dated 27-29 March 2008. <b>Award of Junior Associate ship from Abdus Salam International centre for Theoretical Physics Governed by UNESCO category one. Institute was mentioned by experts in its NAAC Report.</b></p>