

Curriculum Vitae

Dr. Kashmira P. Tank



Personal Details:

- E-mail kashmira_physics@yahoo.co.in
- Cell No +91-9427571911
- Date of Birth: 15th June, 1984.
- Gender: Female
- Marital Status: Married
- Nationality: Indian
- Languages: English, Hindi, Gujarati.

Educational Profile:

- **Ph. D. in Physics** (2013) at Department of Physics, Saurashtra University, Rajkot, Gujarat, India. Title of the Ph. D. thesis, “Synthesis, characterization and Inhibition study of Pure and Doped Nano-apatite”
- **M. Sc. in Physics** (2006) with first Class marks (**66%**) at Department of Physics, Saurashtra University, Rajkot, Gujarat, India.
- **B. Sc. in Physics** (2004) with Distinction marks (**72%**) at Bahauddin Science College, Junagadh, affiliated to Saurashtra University, Rajkot, Gujarat, India.
- **H.S.C.** (2001) with Second Class marks (**50%**) at Government Girls High School, Junagadh, Gujarat (India).
- **S.S.C.** (1999) with Distinction marks (**78%**) at Ideal English School, Junagadh, Gujarat (India).

Research Area :

- Worked on calcium phosphate materials, specially, on Nano-Hydroxyapatite. Synthesized nano-hydroxyapatite by wet chemical technique and modified its properties by various trace metals doping to enhance the biological activity, antimicrobial property and hemolytic nature. With the collaboration of Bio-science Department of Saurashtra University the antimicrobial activity and hemolysis studies were conducted. Having experience of Synthesizing nano-particles by Micro-emulsion and Surfactant Mediated Approach. Also worked on Crystal Growth by Gel Technique and Solution Growth by Slow Solvent Evaporation Method.

Research Experience:

- Awarded **Junior Research Fellow (JRF)** under University Grants Commissions (UGC), New Delhi, BSR Scheme for Meritorious Student

from 22nd December **2007-2009** and worked at Department of Physics, Saurashtra University, Rajkot, Gujarat, India.

- Awarded Senior Research Fellow (JRF) under University Grants Commissions (UGC), **New Delhi**, BSR Scheme for Meritorious Student from 22nd December **2010-2012** and worked at Department of Physics, Saurashtra University, Rajkot, Gujarat, India.
- **1st Rank** in Faculty Category in One Day National Seminar on Recent Trends in Experimental Condensed Matter Physics (RTECMP2017) held at 21st March 2017 at Department of Physics, Saurashtra University, Rajkot, Gujarat, India

Educational Experience:

- At present working as an Assistant Professor of Physics in Government Science College Gandhinagar, Gujarat, India.
- Worked as I/C Head & Assistant Professor in Government Science College, Veraval, Dist: Gir-Somnath, Gujarat, India from 24-04-2018 to 27-01-2022.
- Served as a Head and Assistant Professor (Physics) in Humanities & Science Department of Om Engineering College, Bhesan Road, Junagadh, India, from 22nd August 2013 to 31st May 2016.

Skills:

- Having expertise in synthesis of nano particles of inorganic, organic and bio-materials by different methods.
- Growth of Metal-tartrate and Bio-material Crystals by Gel Technique.
- Experience of handling FT-IR and TGA/DTA/DSC set-ups.
- Knowledge of data analysis of different characterization techniques such as Powder XRD, FT-IR, TEM, TGA/DTA/DSC, EDAX and Dielectric measurements.
- Having experience in participation of some biological study like Antimicrobial activity using common Micro-organisms and Hemolysis Study.

- Computational skill: Basic Computer Skills such as MS-Office and analyzing Powder-XRD data using Powder-X software, TA Evaluation for Thermal Analysis and plotting by Origin software.
- Also familiar with use of **JCPDF** software.

Co-Curricular Activities:

- Participated in “**AKHIL GUJARAT GIRNAR AAROHAN-AVROHAN SPARDHA**” (**National Level Tracking Competition of 3600 ft high Mount Girnar held Every year in Junagadh**) (2002, 2003) at Junagadh, Gujarat, India.
- **3rd Rank** in **Inter College Chess Tournament** in 2003-2004.
- Represented Saurashtra University at **National Level Chess Competition** at **Jamnagar, Gujarat State**, (2003-2004) and at **Vellore, Tamilnadu** state, India (2005-2006).
- Participated in “**YOGA WORKSHOP**” at Junagadh (2005-2006).

Participation and Awards in National and International Events:

- **1st Rank** in District Level Physics Competition at Rajkot (2005).
- **2nd Rank** for Best Research Paper (oral) Presentation in XXI Gujarat Science Congress, Patan, Gujarat (2007).
- **Best Poster Award** in “55th Department of Atomic Energy (DAE) Solid State Physics Symposium-2010”, Manipal University, Manipal, India (2010).
- Attended and Presented paper at International Conference on Materials for Advanced Technologies (ICMAT-2011) conference in **Singapore**, held during 26th June to 1st July, 2011 and funded by Department of Science and Technology (DST), Government of India.

- Attended and Presented paper at ICCGE-2013 in Warsaw, **Poland**, and funded by Council of Scientific and Industrial Research (CSIR), New Delhi, India.
- Selected as a Postdoctoral Fellow at University of Mexico, Mexico.
- Served as a Judge in District Level Science Fair-2019 in Gir-Somnath district.

Reviewer:

- The 4th International Conference on Biomedical Engineering and Biotechnology (ICBEB 2014), held September 25-28, 2014, Beijing, China,
- Industrial & Engineering Chemistry Research
- Journal of Nanoparticle Research

Research Paper Publication

1. **Synthesis of nano – particle of Calcium Pyrophosphate Dihydrate**
S. R. Vasant, **K. P. Tank**, P. M. Vyas, K. B. Mehta, B. B. Parekh and M. J. Joshi
Medical Journal of DY Patil University, Kolhapur, Volume- 2, Issue- 3,(2009)
ISSN-0974-2743, 166 – 170

2. **In vitro growth and inhibition studies of Monosodium Urate Monohydrate Crystals by different Herbal Extracts**
B. B. Parekh, S. R. Vasant, **K. P. Tank**, A. R. Raut, ADB Vaidya, M. J. Joshi
American Journal of Infectious Diseases Volume-5, Issue-3,(2009) 225-230.

3. **Characterization of gel grown iron-manganese-cobalt ternary levo-tartrate Crystals**
S. J. Joshi, **K. P. Tank**, B. B. Parekh and M. J. Joshi
Crystal Research and Technology, Volume -45, Issue- 3,(2010) 303–310
doi: 10.1002/crat.200900152, (Impact Factor – 1.142)

4. **Synthesis and antimicrobial activity of Pure and Strontium doped Nano-Hydroxyapatite**
K. P. Tank, S. R. Vasant, K. Chudasama, V. S. Thaker and M. J. Joshi
54th DAE Solid State Physics Symposium – 2009 Proceeding,

5. **Pure and Strontium Doped Nano-hydroxyapatite: New approach for Bone Implant and Drug Delivery System**
K. P. Tank, S. R. Vasant, K. Chudasama, V. S. Thaker, M. J. Joshi
AIP Conference Proceeding, 1349 (2011) 385

6. **FTIR, powder XRD, TEM and dielectric studies of pure and zinc doped nano Hydroxyapatite**

K. P. Tank, P. Sharma, D. K. Kanchan and M. J. Joshi

Crystal Research and Technology, Volume- 46, Issue-12, (2011)1309 – 1316

(Impact Factor – 1.142)

7. Growth, FT-IR Spectroscopy, Thermogravimetry and Chemical Etching

Studies of Potassium Pentaborate Crystals

Hirenkumar S. Jani, Poorvesh M. Vyas, Sonal R. Vasant, **Kashmira P. Tank**,

Chetan K. Chauhan, B. B. Parekh and M. J. Joshi

Proceedings of XV National Seminar on Crystal Growth, PSNCET, Tirunelveli.

NSCG 2011 – 152 (23-25 February 2011)

8. Dielectric properties of Pure and Strontium doped Nano-Hydroxyapatite,

K. P. Tank, B. V. Jogiya, D. K. Kanchan and M. J. Joshi

Solid State Phenomena Vol. 209, 2014, 151-155

9. Cobalt doped Nano-hydroxyapatite : Synthesis, Characterization, antimicrobial and Hemolytic Studies

Kashmira P. Tank, Kiran Chudasama, Vrinda S. Thaker and M. J. Joshi

Journal of Nanoparticle Research, Volume-15, (2013) 1644-1655

(Impact Factor – 3.2)

10. FT-IR and Thermal Studies of iron-nickel-manganese ternary levo-tartrate Crystals

S. J. Joshi, **K. P. Tank**, B. B. Parekh and M. J. Joshi

Journal of Thermal Analysis and Calorimetry, Volume 112 (2013) 761–766

(Impact Factor – 1.6)

11. Nano-hydroxyapatite: Synthesis, TEM, XRD, FT-IR, TGA and dielectric Study

Kashmira P. Tank, Bhoomika V. Jogiya, D. K. Kanchan and M.J. Joshi

National Seminar on Scientific Wealth of Physics, August 26th 2012

12. Dielectric Study of Strontium Pyrophosphate Nano Particle

P.D.Solanki, S.R.Vasant, **K.P.Tank** and M.J.Joshi

AIP Conference Proceeding 1536, 191 (2013); doi: 10.1063/1.4810165 (ISSN: 15517616)

13. Structural, FTIR, thermal and dielectric studies of gel grown manganese-copper mixed levo tartrate crystals

Sudhir Joshi, **Kashmira Tank**, Poorvesh Vyas and Mihir Joshi

Journal of Crystal Growth, Volume 401, (2014), Pages 210–214 (Impact Factor – 1.6)

14. Pure and zinc doped nano-hydroxyapatite: synthesis, characterization, antimicrobial and hemolytic studies

K. P. Tank, K. S. Chudasama, V. S. Thaker, M. J. Joshi

Journal of Crystal Growth, Volume 401,(2014) Pages 474–479 (Impact Factor – 1.6)

15 FTIR and thermal studies of gel-grown, lead–cadmium-mixed levo tartrate crystals

H. O. Jethva, P. M. Vyas, **K. P. Tank**, M. J. Joshi

Journal of Thermal Analysis and Calorimetry Volume 117 (2014) 589-594 (Impact Factor – 1.6)

16 Synthesis and Characterization of Arginine modified Nano Hydroxyapatite

Bhoomika V. Jogiya, Karan R. Rathod, Kashmira P. Tank, Bharat B. Parekh and M. J. Joshi

International Journal of ChemTech Research Vol 6(3) 2120-2122 2014

17 Article In Gujarati : HYDROXYAPATITE : EK ADBHUT JAIVIK KHANIJ

Pragami Tarang – 2012, Indian Association of Physics Teachers (IAPT) RC – 7 (Gujarat
Kashmira P. Tank

**18 Enhancement of bioactivity of Collagen-Hydroxyapatite nanocomposite on He+ ion Implantation (accepted - <https://doi.org/10.1002/ces2.10163>)
*International Journal of Ceramic Engineering and Science***

Book Published :

➤ **Nano hydroxyapatite and Silver doped Nano-hydroxyapatite**

Kashmira P. Tank

Scholar Press Publication, Germany, 2014, ISBN 978-3-639-71729-7

➤ **Applied Physics – 101 (According to New Syllabus of BHAKTA KAVI NARSINH MEHTA UNIVERSITY)**

V D Bakotra, K P Tank, R K Vora, V Purohit, R Gajera

Bharat Publication House, Ahmedabad, Gujarat, India, 2019 ISBN No. : 978-93-85535-30-7)

➤ **Applied Physics – 201 (According to New Syllabus of BHAKT KAVI NARSINH MEHTA UNIVERSITY)**

U J Vyas, P K Trivedi, K P Tank, R Vora, V. Purohit, R Gajera

➤ **Applied Physics – 401 (According to New Syllabus of BHAKTA KAVI NARSINH MEHTA UNIVERSITY)**

Kashmira P. Tank, Raj K Vora, Vishal Purohit, Rohit Gajera, Parth Kanabar

Bharat Publication House, Ahmedabad, Gujarat, India, 2019 ISBN No. : 978-93-89773-02-6

Research Paper Presented at International and National Level Conferences and Seminars

1. Growth Inhibition of Struvite crystals in the presence of *Citrus medica* Linn

C. K. Chauhan, L. K. Maniar, R. M. Vaisnav, P. M. Vyas, **K. P. Tank**,

D. D. Khunti and M. J. Joshi

11th National Seminar on Crystal Growth, SSN Nagar, Kalavakkam, Chennai,

7th – 9th December, 2006.

2. Dielectric Study of Mixed Crystal of Mn-Fe-Ni Tartrate

Kashmira P. Tank, Sudhir J. Joshi, Dhaval D. Khunti & Mihir J. Joshi

XXI Gujarat Science Congress, Patan. Gujarat 11th March 2007.

3. Magnetic Studies of Mixed Crystal of Mn-Fe-Ni Tartrate

Kashmira P. Tank, S. J. Joshi and Mihir J. Joshi

M. S. University, Baroda. Vadodara. 17th March, 2007.

4. Dielectric Study of Mixed Crystal of Mn-Fe-Co Tartrate

Kashmira P. Tank, Sudhir J. Joshi, Dhaval D. Khunti & Mihir J. Joshi

One day National Seminar on Recent Trends in Material Science

Saurashtra University, Rajkot. 25th March 2007.

5. Synthesis Nanocrystalline Hydroxyapatite By Wet Chemical Process And *In Vitro* Dissolution Study

Kashmira P. Tank, Poorvesh M. Vyas, Bharat B. Parekh & Mihir J. Joshi

The *10th International Conference on Advanced Materials*, IISc Bangalore, India,

8th -13th, October-2007.

6. Study of Vickers Micro – hardness of Mn⁺² doped Calcium Levo-tartrate Tetrahydrate Crystals

S. R. Suthar, V. S. Joshi, **Kashmira Tank**, Sonal Vasant, Kaushal Mehta and M. J. Joshi.

12th National Seminar on Crystal Growth (With International Participation), Centre for Crystal Growth, S. S. N College of Engineering, Chennai. 21 - 23 December 2007.

7. Magnetic Studies of Mixed Crystal of Mn-Fe-Co Tartrate

Kashmira P. Tank, Sudhir J. Joshi, Sonal Vasant, Kaushal B. Mehta, Ravindra R. Gohel and M. J. Joshi

Seminar on Advances in Materials Research (AMR – 08), Department of Physics, Saurashtra University, Rajkot. 15th February, 2008.

8. Synthesis of Nano-particles of Calcium Pyrophosphate Dihydrate

Sonal R. Vasant, **Kashmira P. Tank**, Poorvesh M. Vyas, Kaushal B. Mehta, Bharat B. Parekh and M. J. Joshi

International Conference on “Biomedical Engineering & Nanotechnology, D.Y. Patil College of engineering & Technology, D. Y. Patil University, Kolhapur. 21st -23rd, October 2008.

8. In vitro growth and inhibition studies of Monosodium Urate Monohydrate Crystals by different Herbal Extracts

Bharat B. Parekh, Sonal R. Vasant, **Kashmira P. Tank**, Ashwinikumar Raut, Ashok D. B. Vaidya and M. J. Joshi

International Conference on Molecular Medicine, Indian Institute of Technology, Madras, Chennai. 18th -20th January 2009.

10. Synthesis and characterization of Zn-doped nano Hydroxyapatite.

Kashmira P. Tank, Sonal R. Vasant, Bharat B. Parekh, Poorvesh M. Vyas, Ravindra R. Gohel and M. J. Joshi

XXII Gujarat Science Congress, Surat. Gujarat. 15th Feb. 2009.

11. Synthesis and antimicrobial activity of Pure and Strontium doped Nano hydroxyapatite

Kashmira P. Tank, Sonal R. Vasant, Kiran Chudasama, Vrinda Thaker and M. J. Joshi

54th DAE Solid State Physics Symposium – 2009, M. S. University, Vadodara. 14th -18th December 2009.

12. Comparative Study of Crystal Structure of Gel grown Hydroxyapatite and Nano-Hydroxyapatite

Bharat B. Parekh, **Kashmira P. Tank** and M. J. Joshi

XXXIX National Seminar on Crystallography, University of Jammu, Jammu. 25th-27th October 2010.

13. Pure and Strontium Doped Nano-hydroxyapatite: New approach for Bone Implant and Drug Delivery System

Kashmira P. Tank, Sonal R. Vasant, Kiran Chudasama, Vrinda Thaker and M. J. Joshi

55th DAE Solid State Physics Symposium – 2010, Manipal University, Manipal. 26th -30th December 2010.

14. Synthesis and Characterization of Pure and Zinc doped Nano-Hydroxyapatite

Kashmira Tank and Mihir Joshi

International Conference on Materials for Advanced Technologies, ICMAT– 2011. Singapore, 26th June to 1st July, 2011.

15. Dielectric Properties of Pure and Strontium Doped Nano-Hydroxyapatite.

Kashmira P. Tank, Bhoomika V. Jogiya, D. K. Kanchan and M. J. Joshi

National Symposium on Advances in Material Science and Technology (AMST)- 2012. Gujarat University, Ahmedabad, India., 3rd-4th February, 2012

16. Antimicrobial and Hemolysis study of Pure and zinc doped nano-hydroxyapatite

Kashmira P. Tank, Kiran S. Chudasama, Vrinda S. Thaker and M. J. Joshi
16th National Convention of Society of Pharmacognosy and International Symposium on Herbal and Traditional Medicine, “Frontier in Drug Discovery from Herbal & Traditional Medicine”, Department of Pharmaceutical Science, Saurashtra University, Rajkot, 9th – 11th March, 2012.

17. Nano-hydroxyapatite: Synthesis, TEM, XRD, FT-IR, TGA and dielectric study

Kashmira P. Tank, Bhoomika V. Jogiya, D. K. Kanchan and M.J. Joshi
One day National Seminar on “Scientific Wealth of Physics, Department of Physics, Saurashtra University, Rajkot, 26th August 2012.

18. Synthesis and Characterization of ZnS nano Particles

Khushboo S. Chugh, Sonal R. Vasant, **Kashmira P. Tank**, Bharat B. Parekh and M.J. Joshi.
Preparation and Characterization of Crystalline and Non-crystalline solids, 2nd Nov. 2012, M. S. University, Baroda.

19. Synthesis and Characterization of Nano Struvite

Karan Rathod, Nirali Tank, Khushboo S. Chugh, **Kashmira Tank**, Poorvesh Vyas, Chetan Chauhan and Mihir J. Joshi
International Work Shop on Advanced Material, , Ras Al Khaimah, UAE.
24th- 26th Feb. 2013.

20. Study of L-arginine doped Potassium Pentaborate Crystals

H. S. Jani, R. R. Hajiyani, **K. P. Tank**, P. M. Vyas and M. J. Joshi
One day Seminar on Current Trends in Research and Applications of Physical Sciences in Gujarat, Sardar Patel University, Gujarat, 29th December 2012

21. Synthesis and Characterization of Monosodium urate Monohydrate

Nanoparticles

N. Tank, K. Chugh, K. Rathod, K. Tank, P. Vyas and M. J. Joshi

One day Seminar on Current Trends in Research and Applications of Physical Sciences in Gujarat, Sardar Patel University, Gujarat, 29th December 2012

22. Nano-hydroxyapatites: Synthesis studies

B. V. Jogiya, K. P. Tank and M. J. Joshi

One day Seminar on Frontier of New Materials

Department of Physics, Saurashtra University, Rajkot Gujarat, 23rd January, 2014

23. Methods for the synthesis and characterization of nano

Himani Thakar, B.V. Jogiya, K.P. Tank

XXXI Gujarat Science Congress 2017

GERMI-PDPU, Gandhinagar, Gujarat, 4th-5th February 2017

24. Concertation effect of Strontium on Hydroxyapatite nanoparticles and its properties

K. P. Tank, S. Chudasama, V. S. Thaker, M. J. Joshi

National Conference on Inclination of Modern Science towards Environmental Protection and Sustainable Development

Indian Science Congress Association (Baroda Chapter) in Collaboration with Bahauddin Science College-Junagadh & Department of Botany, Faculty of Science, M. S. University, Baroda, 23rd January, 2019

25. An antimicrobial activity of Rubiacordifolia Root Extracts

V. Patel, B. V. Jogiya, K. P. Tank

National Conference on Inclination of Modern Science towards Environmental Protection and Sustainable Development

Indian Science Congress Association (Baroda Chapter) in Collaboration with Bahauddin Science College-Junagadh & Department of Botany, Faculty of Science, M. S. University, Baroda, 23rd January, 2019

26. Hybridized nanocomposites electrochemical supercapacitor: A next generation energy storage device

P.Periasamy, T. Krishnakumar, B. V. Jogiya.K. P. Tank,V.P. Devarajan

National Conference on Inclination of Modern Science towards Environmental Protection and Sustainable Development

Indian Science Congress Association (Baroda Chapter) in Collaboration with Bahauddin Science College-Junagadh & Department of Botany, Faculty of Science, M. S. University, Baroda, 23rd January, 2019