

LIST OF PUBLICATIONS

As Books:

1. **Rajesh B Khaparde**, H. C. Pradhan, (2021) *Collection of Experimental Problems in Physics*, Notion Press Media Pvt Ltd, India, ISBN: 9781639047185, pages 134.
2. **Rajesh B. Khaparde**, H. C. Pradhan, (2009), *Training in Experimental Physics Through Demonstrations and Problems*, First Edition, Penram International Publishing (India) Pvt. Ltd., ISBN: 8187972343, pages 328.
3. **Rajesh B. Khaparde**, H. C. Pradhan, (2002), *Innovative Experimental Problems and Demonstrations in Physics (A Course Manual)*, HBCSE-TIFR, Mumbai, pages 129.

In Journals:

1. Sparsh Sinha, **Rajesh B. Khaparde** and Ajit M. Srivastava, (2021), Rainbow and Acid Rain, *Student Journal of Physics*, 8(3), pp 139-147.
2. Surajit Chakrabarti, **Rajesh B Khaparde** and Alimohammed H Kachwala, (2020), Experimental study of the coefficient of rolling friction of the axle of a Maxwell's wheel on a soft horizontal surface, *European Journal of Physics*, 41(3), 035803.
3. Dhiman Biswas, Simran Chourasia, Rathindra Nath Das, **Rajesh B. Khaparde** and Ajit M. Srivastava, (2018), Mirage in geometrical optics and the horizontal ray, *Student Journal of Physics*, 7(4), 153-173.
4. Ninad R. Jetty, Akash Suman and **Rajesh B. Khaparde**, (2012), Novel cases of diffraction of light from a grating: Theory and experiment, *American Journal of Physics*, 80 (11), 972-979.
5. **Rajesh B. Khaparde** and H. C. Pradhan, (2010), Fourier Analysis Using an Op-Amp Filter, *Physics Education*, 27(3), 191-206.
6. **Rajesh B. Khaparde** and H. C. Pradhan, (2010), An Experiment on Equipotential Curves, *Physics Education*, 27(1), 27-38.
7. Harish Ravi and **Rajesh B. Khaparde**, (2010), Understanding DC motors through experiments, *Resonance*, 15(6), 561-572.
8. **Rajesh B. Khaparde** and H. C. Pradhan, (2009), An Experiment on the Formation of Rainbows, *Physics Education*, 26(1), 65-76.
9. **Rajesh B. Khaparde** and H. C. Pradhan, (2008), Electromagnetic Damping of a Rotating Disc, *Physics Education*, 25(3), 193-204.
10. **Rajesh B. Khaparde**, Smitha Puthiyadan and H. C. Pradhan, (2007), Reflection of Polarized Light, *Physics Education*, 24(4), 289-299.
11. **Rajesh B. Khaparde** and Smitha Puthiyadan, (2007), Efficiency of a Light Emitting Diode, *Physics Education*, 23(4), 291-298.

12. Vijay A. Singh, **Rajesh B. Khaparde** and S. R. Pathare, (2005), The Mechanical Black Box: A Challenge from the 35th International Physics Olympiad, *Resonance*, 10 (4), 75-82.
13. **Rajesh B. Khaparde** and H. C. Pradhan, (2002), Procedural Understanding: A Neglected Aspect of Physics Laboratory Training, *Physics Education*, 19 (2), 147-154.
14. **Rajesh B. Khaparde** and H. C. Pradhan, (2002), Physics Laboratory Training: Historical Overview, *Physics Education*, 18 (3+4), 229-234.
15. Dhruva Bhattacharjee, **Rajesh B. Khaparde** and H. C. Pradhan, (1999), An Experiment-cum- Demonstration with a Magnetic Circuit, *Physics Education*, 16 (3), 251-262.
16. **Rajesh B. Khaparde**, B. N. Meera and H. C. Pradhan, (1997), An Inexpensive Technique of Interfacing Photogates with Digital Stop-clocks and Its Applications, *Physics Education*, 14 (2), 131-138.
17. **Rajesh B. Khaparde**, B. N. Meera and H. C. Pradhan, (1997), Study of Stationary Longitudinal Oscillations on a Soft Spring, *Physics Education*, 14 (1), 13-19.

In Conference Proceedings:

1. **Rajesh Khaparde** and A. M. Shaker, (2020), What are Experimental Skills? A Study with In-Service Teachers, *IOP Journal of Physics.: Conference Series* 1512, 012022.
2. **R. Khaparde**, (2019), What are the objectives and goals of physics laboratory courses ? A survey of college teachers, *IOP Journal of Physics.: Conference Series* 1286, 012037.
3. **R. Khaparde**, (2019), Experimental problem solving: a plausible approach for conventional laboratory courses, *IOP Journal of Physics.: Conference Series* 1286, 012031.
4. **Rajesh B. Khaparde**, (2014), It is never too late to introduce procedural understanding: A case of physics laboratory course for undergraduate students, *ICPE-EPEC 2013 Proceedings, Charles University in Prague, MATFYZPRESS publisher, Prague, Czech Republic*, ISBN 978-80-7378-266-5, pp.736-741.
5. **Rajesh B. Khaparde**, (2014), A novel approach to encourage students' independent thinking in the physics laboratory, *Proceedings of the World Conference on Physics Education (WCPE) 2012, Pegem Akademi, Ankara, Turkey*, ISBN - 978-605-364-658-7.
6. **Rajesh B. Khaparde**, (2014), A comprehensive assessment strategy for physics laboratory courses, *Proceedings of the World Conference on Physics Education (WCPE) 2012, Pegem Akademi, Ankara, Turkey*, ISBN - 978-605-364-658-7.

7. **Rajesh B. Khaparde**, (2010), Need for Initiatives to Promote Procedural Understanding in Physics among School Teachers, *American Institute of Physics Conf. Proc.* 1263, p. 51.
8. **Rajesh B. Khaparde**, (2008), Innovative Strategies for the Laboratory Instruction and Evaluation, *Undergraduate Physics Teaching: Search for Effective Methodology (UGPT-08)*, Indian Physical Society-IAPT, Kolkata.
9. **Rajesh B. Khaparde** and H. C. Pradhan, (2001), Procedural Understanding: A Neglected Aspect of Physics Laboratory Training, *XVI National Annual Convention of IAPT, Yavatmal*.
10. **Rajesh B. Khaparde** and H. C. Pradhan, (1998), Demonstrations in Electricity and Magnetism, *XIII National Annual Convention of IAPT, Guru Ghasidas University, Bilaspur*.

As Reports/Thesis:

1. **Rajesh B Khaparde**, (2013), *Collection of Experimental Problems in Physics - SCEP 2013 and NIUS 10.1*, HBCSE-TIFR, Mumbai.
2. **Rajesh B Khaparde**, (2008), *A Manual for HBCSE-CMI Course in Experimental Physics*, HBCSE-TIFR, Mumbai.
3. **Rajesh B. Khaparde**, (2007), *Physics Laboratory Course (PL 101)*, (Designed and developed for NISER, Bhubaneswar and UM-DAE-CEBS, Mumbai).
4. **Rajesh B. Khaparde**, H. C. Pradhan, (2001), *Manual of a Course on Innovative Experimental Problems and Demonstrations in Physics*, Technical Report No. 5 (2001–02), HBCSE-TIFR, Mumbai, (2001)
5. **Rajesh B. Khaparde**, (2001), *Development of Innovative Experimental Problems and Demonstrations in Physics with Suitable Instructional Strategy for Them and Investigating Their Effectiveness in Laboratory Training*, Ph. D. Thesis, HBCSE, TIFR, (Submitted to the University of Mumbai), Mumbai.
6. **R. B. Khaparde**, (1994), *Design and Fabrication of a Microprocessor Based X-Ray Diffractometer*, M Sc (II) Project Report, Department of Physics, Nagpur University, Nagpur.

As Posters:

1. **Rajesh B. Khaparde**, (2009), *Physics Laboratory Training and Evaluation: Some Suggestions*, PHYSWARE-1 Workshop, Abdus Salam ICTP, Italy.
2. N. V. Moghe, V. S. Pai, **R. B. Khaparde** and V. B. Sapre, (1995), *Design and Fabrication of a low-cost X-ray Diffractometer/Spectrometer*, National Seminar on X-ray Spectroscopy, Department of Physics, Nagpur University, Nagpur.

As Manuscripts (online):

1. Gurinder Singh, **Rajesh B Khaparde**, (2013), *The state of experimental activities in Indian school science: an investigation in to the existing problems and possible strategies*, Field work Report, (DOI: 10.13140/RG.2.2.30910.79683).
2. **Rajesh Khaparde**, (2012), Physics Laboratory Training in India, (DOI:10.13140/RG.2.2.21597.849 65).
3. **Rajesh B Khaparde**, (2011), Essentials of Physics Laboratory Training, (DOI:10.13140/RG.2.2.283 08.73609).

As Abstract:

1. **Rajesh Khaparde**, (2018), The Role of Experimental Problem Solving in Training of a Physicist, AAPT Summer Meeting 2018, Washington DC, (accepted for oral presentation).

As Video Presentation:

1. A video presentation on how to assemble the 46th IPhO 2015 Experimental setup. (2016), 38.39 Minutes, <https://www.youtube.com/watch?v=s4-N7qVtzuY>

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