




Bharathiar University

State University | "A⁺⁺" Grade by NAAC | 46th Rank in MoE-NIRF
Maruthamalai Road, Coimbatore, Tamil Nadu - 641 046.

Dr R KALAI SELVAN Associate Professor Department of Physics Bharathiar University Tamil Nadu E-mail: selvankram@buc.edu.in Phone: 4222428449 Office Number: 0422-2428449	
Research Area <ul style="list-style-type: none">• Energy Storage Devices• Electrocatalytic Materials• Magnetic Materials	Courses Teaching <ul style="list-style-type: none">• Condensed Matter Physics• Advanced Physics• Electrochemical Energy Devices
Research Experience: 18	Teaching Experience: 16
Research Credentials (as on March 2026 – Source: Google scholar) H-index: 65 Citations: 12967 i10-index: 146	
Publications International Journals: 177 National Journals: 1 Books/Chapters: 2	
Career At Bharathiar University <ol style="list-style-type: none">1. Designation : Associate Professor Period : February 2019 - Till Date2. Designation : Assistant Professor Period : February 2009 - February 2019 Other Institutes <ol style="list-style-type: none">1. Designation : Post Doctoral Fellow Institution Name : Bar-Ilan University, ISRAEL Period : January 2007 - December 20082. Designation : Post Doctoral Fellow Institution Name : North Carolina State University, USA Period : August 2016 - February 2017	
Education Ph. D. Subject : Physics Institution : Alagappa University Affiliated University : Alagappa University Year of Award : December 2006 M. Phil. Subject : Physical Science Institution : Madurai Kamaraj University Affiliated University : Madurai Kamaraj University Year of Award : April 2001	



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Dr R KALAI SELVAN , Associate Professor , Department of Physics

M. Sc.

Subject : Physics

Institution : NMSSVN College

Affiliated University : Madurai Kamaraj University

Year of Award : April 1999

B. Sc.

Subject : Physics

Institution : Vivekananda College

Affiliated University : Manonmaniam Sundaranar University

Year of Award : April 1997

Projects

National Level

Ongoing - 1 completed - 7

Research Guidance

Completed

M.Phil. - 16 Ph.D. - 13

Submitted

Ph.D. - 1

On Going

Ph.D. - 4

Visits

1. Postdoctoral Fellow at Bar-Ilan University, ISRAEL (2007-01-17 - 2008-12-31)
2. Raman Post Doctoral Fellow at North Carolina State University, USA -)
3. Attended the Workshop at ICTP, Italy -)
4. Attended the ICAC-2013 Conference in JAPAN -)
5. Attended the SSI-2019 Conference in S.KOREA -)

Programs organized

1. Organized the AMEEA-2015 Conference at Department of Physics, Bharathiar University -)

Selected Publications

1. Improved K-ion diffusion kinetics of cobalt-substituted P3-type KxMnO2 electrodes for K-ion Batteries.

ACS Applied Energy Materials, 7 (2024) 2600-2613 (March 2024)
N. Prasanna Naga Puneeth, S.D.Kaushik, R.Kalai Selvan

2. Nano-graphitic crystallites effect on the improved K-ion intercalation properties of Kigelia Africana fruit-derived hard carbon for potassium-ion batteries.

Chemical Engineering Journal, 480 (2024) 147835 (January 2024)
Prasanna Naga Puneeth, K. Rajkumar, A. Soundarya, S.D.Kaushik, Yun-Sung Lee, Sangho Park, R.Kalai Selvan

3. Biomass derived porous Carbon modified glass fiber separator as polysulfide reservoir for Li-S batteries

Journal of Colloid and Interface Science, 513 (2018) 231-239 (March 2018)
R.Kalai Selvan, Pei Zhu, Chaoli Yan, Jiandeng Zhu, M Dirican, A Shanmugavani, Y S Lee, Xiangwu Zhang,

4. Improved Electrochemical Performances of Flexible Graphene based Supercapacitor Using KI as Redox

Additive Electrolyte

Carbon, 90 (2015) 260-273 (August 2015)
K.Vijaya Sankar, R. Kalai Selvan



5. The ternary Manganese ferrite/graphene/polyaniline Hybrid Composite as Negative electrode for

Supercapacitors

Journal of Power Sources, 275 (2015) 399-407 (February 2015)
K. Vijayasankar, R. Kalai Selvan

6. Synthesis and Electrochemical Performances of Maricite-NaMPO₄ (M=Ni, Co, Mn) Electrodes for Hybrid

Supercapacitors

RSC Advances, 4 (2014) 53192-53200 (October 2014)
B.Senthilkumar, K.Vijaya Sankar, Leonid Vasylechko, Y.S.Lee, R.Kalai Selvan

7. Electric double layer capacitor and its improved specific capacitance using redox additive electrolyte

Journal of Materials Chemistry A, 1 (2013) 1086 – 1095 (September 2013)
S.T.Senthilkumar, R.Kalai Selvan, Y.S.Lee, J.S.Melo

8. Redox additive/active electrolytes: An efficient way to enhance the performance of electrochemical capacitors

Journal of Materials Chemistry A, 1(2013) 12386-12394 (May 2013)
S.T.Senthilkumar, R. Kalai Selvan, J. S. Melo

9. Synthesis of hexagonal shaped SnO₂ nanocrystals and SnO₂@C nanocomposites for electrochemical redox supercapacitors

Journal of Physical Chemistry C 112 (2008) 1825 - 1830 (January 2008)
R. Kalai Selvan, I. Perelshtein, N. Perkas, A. Gedanken

10. Investigations on the Structural, Morphological, Electrical and Magnetic Properties of CuFe₂O₄ - NiO

Nanocomposites

Chemistry of Materials 20 (2008) 429 - 439 (January 2008)
R. Kalai Selvan, V. Krishnan, C. O. Augustin, H. Bertagnolli, C. S. Kim, A. Gedanken