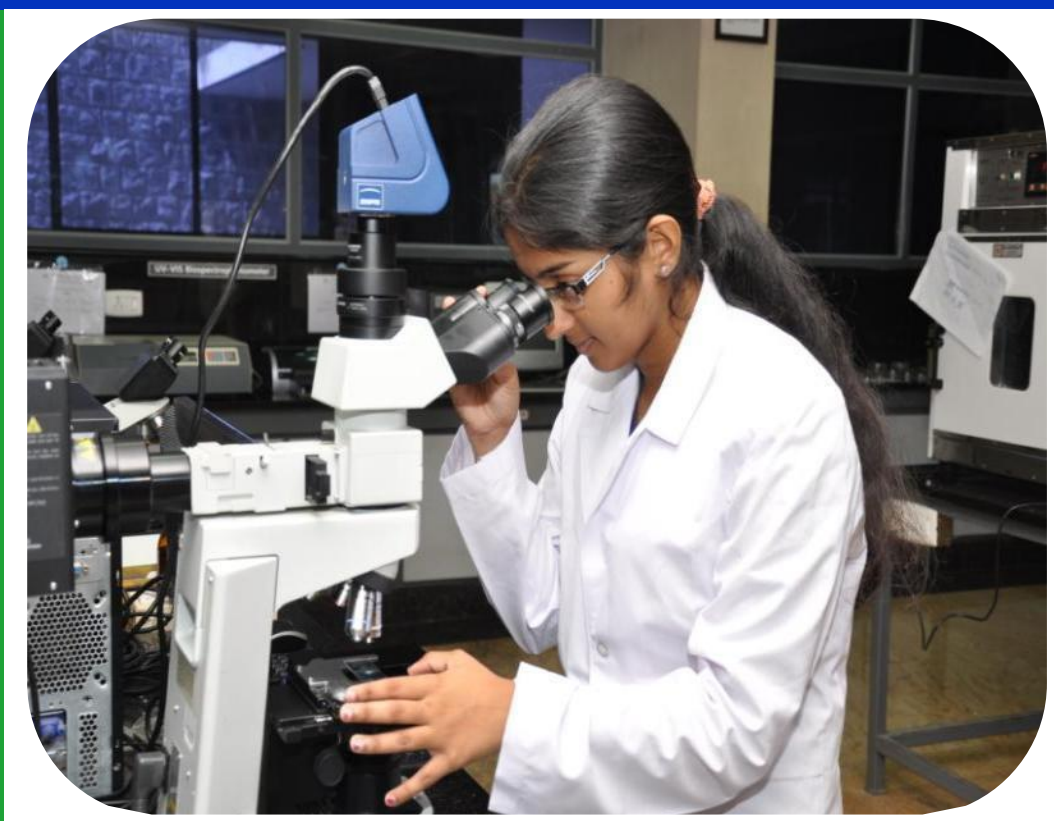


June – November

2018 – 19

Research Newsletter



Volume 01 | Issue 01



BANNARI AMMAN
INSTITUTE OF TECHNOLOGY

Autonomous Institution, Accredited by NAAC With 'A' Grade

Research Advisory Board

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Retired Group Director
DRDO Bangalore

Dr. M. Thirumoorthy

DRDO Hyderabad

HIGHLIGHTS

No. of Scopus indexed publications : **245**

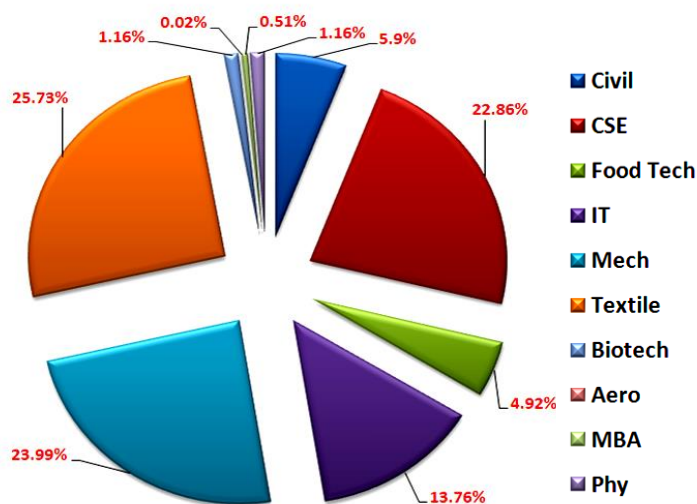
No. of funded projects : **19**
(ongoing)

Total value of funded projects: **Rs.2,96,21,080**
(ongoing)

No. of Ph.D. degrees awarded : **24**

No. of programmes organized for the benefit for
faculty members : **12**

ONGOING CONSULTANCY ACTIVITIES



Total revenue generated: **Rs. 24,39,668**

AWARDS WON BY FACULTY MEMBERS

SERB–Early Career Research Award



Awardee : Dr. B. Soundara, Professor and Head, Department of Civil Engineering

Amount : Rs.20,38,600

Nature of work : Moisture content & dry density on swelling and swelling pressure of soil and soil with EPS column (SWEPSC)

AICTE - Career Award for Young Teacher



Awardee : Dr. Arunava Das, Associate Professor, Department of Bio-technology

Amount : Rs.1,50,000

Nature of work : Antimicrobial peptide isolated from *Lactobacillus plantarum*

ONGOING FUNDED PROJECT

Ecosmart formulation of low -cost novel plant extract based nanoemulsion for larvicidal and repellent application



PI: Dr. Sudarshana Deepa, Associate Professor, Dept. of Biotech

Funding agency : DST-SERB

Amount : Rs.23,80,000

Nature of work : Optimizing the nano-emulsion and characterization of the product

PUBLICATION OF TECHNICAL BOOK

Nanoscience and Nanotechnology in Foods and Beverages



Authors : Dr. V. Chelladurai, Associate Professor and Head, Department of Agriculture Engineering, BIT

Dr. Digvir S. Jayas, Vice President (Research and International), University of Manitoba, Canada

Publisher : CRC Press, Taylor and Francis

ONGOING FUNDED PROJECTS UNDER SERB & NRDMS

High - Value Co-product Strategy of Cyanobacteria Biomass Production Utilization Garcinia Camogia Spent Wash



PI: Dr. R. Ravikumar, Professor, Biotechnology

Funding agency : DST - SERB

Amount : Rs. 15, 06, 600

Nature of work : Photo bioreactor and cyanobacteria biomass production

Open Source Tool for Land Use Monitoring using Geo spatial data



PI: Dr. Paarivallal Ra, Asst Prof, Comp. Sci.

Funding agency : DST-NRDMS

Amount : Rs.5,60,000

Nature of work : Land use monitoring system with an open access tool

DEVELOPMENT OF FACILITIES UNDER FIST

Fund for Improvement of Science and Technology Infrastructure



PI: Dr. K. Subramaniam, Professor, Biotech

Funding agency : DST-FIST

Amount : Rs.30,00,000

Nature of work : Strengthening of facilities

SERB SPONSORED RESEARCH PROJECT

Development of Novel and Intensified metabolic bio refinery Technology for sustainable ethanol production



PI: Dr. R. Ravikumar, Professor, Biotech

Funding agency : DST-SERB

Amount : Rs.41,82,200

Nature of work : Ethanol from rice straw & sunflower stalk

SERB SPONSORED ONGOING RESEARCH PROJECTS

Study of light modulation, optical shuttering and light filtering action in hydrogen bonded liquid crystals



PI: Dr. M. L. N. Mohan, Professor, Department of Electronics and Communication Engineering

Funding agency : SERB

Amount : Rs.22,00,000

Nature of work : Hydrogen bonded liquid crystals

Implications of Co-Composting of Faecal - Rich Sewage



PI: Dr. M. Vasudevan, Asst. Prof (Selection Grade), Department of Civil Engineering

Funding agency : DST-SERB

Amount : Rs.33,95,780

Nature of work : Designing and operating of pilot scale co-composting unit

RUFFORD (UK) SPONSORED PROJECT

Field Implementation and Design Upgradation of Automated Roadkill Prevention System



PI: Dr. Sanjoy Deb, Associate Professor, Department of ECE

Funding agency : Rufford Foundation, UK

Amount : Rs.3,72,000

Nature of work : Roadkill Prevention System

AICTE SPONSORED PROJECT UNDER RPS

Molecular characterization and evaluation of antibacterial property of novel bacteriocin



PI: Dr. Arunava Das, Associate Professor, Department of Biotechnology

Funding agency : AICTE - RPS

Amount : Rs.9,59,900

Nature of work : Isolating and identifying the bacteriocin

FACULTY ACHIEVEMENTS

Science Academies' Research Fellowship at IISc Bangalore



Fellowship Awardee :

Dr P Tamilselvi, Assistant Professor, Department of Physics

Duration : 08 Weeks

AICTE-QIP Faculty Research Fellowship at IIT Delhi



Fellowship Awardee :

Shri S Vignesh, Assistant Professor, Department of Mechatronics and R&D

Duration : 02 Months

Science Academies' Research Fellowship at IIT-BHU Varanasi



Fellowship Awardee :

Shri S Ashwin Raj, Assistant Professor, Department of Biotechnology

Duration : 08 Weeks

DST-IDP SPONSORED RESEARCH PROJECT

Design, development and validation of thermocycler and real time cycler



PI: Dr. S. P. Selvaraj, Professor and Head, Department of EIE

Funding agency : DST - IDP

Amount : Rs.35,00,000

Nature of work : Development of thermocycler

RuTAG (IIT Madras) SPONSORED PROJECT

Solar-powered cooling plastic bags for flower vendors



PI: Dr. Srisaran V, Associate Professor, Department of Mechatronics

Funding agency : RuTAG (IIT Madras)

Amount : Rs.82,300

Nature of work : Development of solar-powered cooling plastic bags

MENTORING INSTITUTIONS (Margadarshan)

Grant for sharing and mentoring other institutions under Margadarshan



PI: Dr. P. Thangaraj, Dean, Computer Science & Engineering

Funding agency : AICTE - Margadarshan

Amount : Rs. 18,00,000

Nature of work : Mentoring other institutions

RESEARCH PROJECT SPONSORED BY SERB

Investigation of Medicinal Plants from Western Ghats for Flavonoids



PI: Dr. R. Praveena, Asst. Prof (Selection Grade), Department of Chemistry

Funding agency : DST - SERB

Amount : Rs. 15,88,950

Nature of work : Experimental and Theoretical Validation

ONGOING RESEARCH UNDER DAE - BRNS

Synthesis of Hydrogen bonded ferroelectric Liquid Crystals for optical modulator and shutter



PI: Dr. V. N. Vijayakumar, Asst Prof (Selection Grade), Dept. of Physics

Funding agency : DAE - BRNS

Amount : Rs.10,97,250

Nature of work : Hydrogen bonded ferroelectric Liquid Crystals

IEF (US) SPONSORED RESEARCH PROJECT

Smart Fence for early elephant warning: Prototype design and Field implementation



PI: Dr. Sanjoy Deb, Associate Professor, Department of ECE

Funding agency : IEF - US

Amount : Rs.4,09,500

Nature of work : Prototype design and Field implementation

DRDO SPONSORED RESEARCH PROJECT

Implementing Textured Surface for Drag Reduction & Anti-Icing in Remotely Piloted Aircraft System



PI: Dr. S. Gollakota (Retd. Scientist – DRDO)

Funding agency : DRDO-ADE

Amount : Rs.4,50,000

Nature of work : Fabrication of ultrahydrophobic surface through novel method

GRANTS SANCTIONED FROM AICTE

AICTE has provisionally recommended the following proposals under Quality Improvement Scheme (QIS)

i) **Dr. C. Palanisamy** - Principal, Department of Information Technology under "Faculty Development Programme (FDP)"



ii) **Dr. R. Senthilkumar**, Professor, Department of EEE under "MODROBS" scheme for modernization of laboratory



iii) **Dr. D. Saravanan**, Professor and Dean, Department of Textile Technology under "Grant for Organizing Conference"



iv) **Dr. K. Balakrishnan**, Principal Scientific Officer, TBI under "SAMRIDHI" for establishing programme centre for SC/ST students



FINANCIAL SUPPORT FOR SCIENCE CAMP



PI: Dr. K. Senthil, Associate Professor and Head, Department of Physics

Funding agency : DST - INSPIRE

Amount : Rs.9,75,000

Purpose : For the purpose of organizing INSPIRE Internship Science Camp

AICTE SPONSORED ONGOING RESEARCH PROJECT

Development of axial flux permanent magnet generator



PI: Dr. R. Bharanikumar, Professor, Department of Electrical and Electronics Engineering

Funding agency : AICTE - RPS

Amount : Rs.12,23,000

Nature of work : Development of permanent magnet generator

MODERNIZATION OF LAB – FUNDED BY AICTE

Modernization of Virtual Reality and Prototyping Lab



PI: Dr K Sivakumar, Dean, Department of Mechanical Engineering

Funding agency : AICTE - MODROBS

Amount : Rs.5,25,000

SELECTED RECENT PUBLICATIONS

1. Jeeva, A., **Vijayanand, P. S., Ashokan, S.**, Kojima, T., Kato, S., & Deepalekshmi, P. (2018). A facile synthesis of poly(aniline-co-3-trifluoromethyl aniline) doped silver nanoparticles in micellar solution: Its humidity sensor application. Polymer Science - Series B, 60, 505-515. doi:10.1134/S1560090418040048
2. Kumar, P. M., **Sivakumar, K.**, & Jayakumar, N. (2018). Multiobjective optimization and analysis of copper–titanium diboride electrode in EDM of monel 400™ alloy. Materials and Manufacturing Processes, 33, 1429-1437. doi:10.1080/10426914.2017.1415439
3. Yuvaraj, N., & **Thangaraj, P.** (2018). Machine learning based adaptive congestion window adjustment for congestion aware routing in cross layer approach handling of wireless mesh network. Cluster Computing. doi:10.1007/s10586-018-2357-y

4. Vandarkuzhali, S. A. A., Karthikeyan, S., Viswanathan, B., & **Pachamuthu, M. P.** (2018). Arachis hypogaea derived activated carbon/Pt catalyst: Reduction of organic dyes. *Surfaces and Interfaces*, 13, 101-111. doi:10.1016/j.surfin.2018.07.005
5. Padmanabhan, K., **Vasudevan, M.**, Ramakrishnan, S., & Natarajan, N. (2017). Feasibility study on decontamination of aged spent wash using activated carbon from limonia acidissima shell. *Desalination and Water Treatment*, 82, 369-378. doi:10.5004/dwt.2017.21054
6. Sathish Kumar, T. R., **Jegadheeswaran, S.**, & Chandramohan, P. (2018). Performance investigation on fin type solar still with paraffin wax as energy storage media. *Journal of Thermal Analysis and Calorimetry*, doi:10.1007/s10973-018-7882-7
7. **Das, A.**, Harshadha, K., Dhinesh Kannan, S. K., Hari Raj, K., & Jayaprakash, B. (2018). Evaluation of therapeutic potential of eugenol-A natural derivative of syzygium aromaticum on cervical cancer. *Asian Pacific Journal of Cancer Prevention*, 19, 1977-1985. doi:10.22034/APJCP.2018.19.7.1977
8. Sangameswari, G., **Pongali Sathya Prabu, N.**, & **Madhu Mohan, M. L. N.** (2018). A detailed study of hydrogen bonded ferroelectric mesogens formed between alkyl and alkyloxy benzoic acids with carbamyl glutamic acid. *Liquid Crystals*, 45, 431-449. doi:10.1080/02678292.2017.1342145
9. **Kalil Rahiman, M.**, & Santhoshkumar, S. (2018). Comparative studies of oxygenated fuel synthesis with diesel from the measurements of density, speed of sound and refractive index. *Journal of Thermal Analysis and Calorimetry*, doi:10.1007/s10973-018-7828-0
10. Selvaraj, A. R., Rajendiran, R., Chinnadurai, D., Rajendra Kumar, G., Kim, H., **Senthil, K.**, & Prabakar, K. (2018). Stabilization of cryptomelane MnO₂ nanowires tunnels widths for enhanced electrochemical energy storage. *Electrochimica Acta*, 283, 1679-1688. doi:10.1016/j.electacta.2018.07.095

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