



**DEPARTMENT OF RUBBER & PLASTICS TECHNOLOGY
MIT CAMPUS, ANNA UNIVERSITY
CHROMEPET, CHENNAI – 600 044**

**Dr.B.KOTHANDARAMAN
PROFESSOR & HEAD**

Ref.No. MIT/RPT/Annual Report/2016-17

Dated: 14.08.2018

To

The Professor
Planning and Development
Anna University
Chennai 600 025

Sir,

Sub: Annual Report for 2017-2018 – Particulars furnished – Reg.

I am furnishing here with the Annual Report Particulars for the period from 01.07.2017 to 30.06.2018 for your kind information.

Thank you,

Yours faithfully,

HOD, RPT

ANNA UNIVERSITY
Chennai 600 025

FORMAT FOR ANNUAL REPORT FOR THE YEAR 2016-2017 - JULY TO JUNE

Period from 01.07.2016 to 30.06.2017 (July to June)

**Name of the Department: DEPARTMENT OF RUBBER & PLASTICS
TECHNOLOGY**

1. Detailed List of Professors, Associate Professors, Assistant Professors and their Ph.D. specialization during the period **(01.07.2016 to 30.06.2017)**

Sl. No.	Name of the Professor	Date of Superannuation	E-mail Address	Field of Specialization
1.	Dr.B.Kothandaraman Professor	August 2023	bkraman@mitindia.edu	Rubber modified thermosets
2.	Dr.V.Subrahmanian Professor	April 2021	vsubbu@mitindia.edu	Elastomer Engineering, Carbon black, Rubber- Textile composites
3.	Dr.N.Natchimuthu Professor	April 2025	nmuthu@mitindia.edu natchimuthu@annauniv.edu	Rubber Technology, Polymer blends, Polymer Recycling
4.	Dr.K.Ravichandran Professor	June 2025	ravi@mitindia.edu	Polymer Blends and Composites ,Polymer Processing, Conductive Elastomers, Organic- Inorganic Hybrid nano composites, Reinforcement of bioplastics, Latex processing
5	Dr.L.S.Jayakumari Associate Professor	February 2033	jaya@mitindia.edu jayakumari@annauniv.edu	Polymer Synthesis, Polymer Composites & Nano composites
6.	Dr.K.Elangovan	May 2038	elangok@mitindia.edu	Rapid tooling, Polymer Matrix Composites

**Name of the Department: DEPARTMENT OF RUBBER & PLASTICS
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2. List of Degrees **awarded** during the period **(01.07.2016 to 30.06.2017)**

a. **M.Phil / Ph.D :**

Sl. No.	Title of the Thesis	Name of the Scholar	Name of the Supervisor	Month & Year of Viva-voce conducted
1	Study Of Newly Developed Biobased Polymer Composite As A Friction Material	Stephen Bernard S	Dr.L.S.Jayakumari	13.04.2017
2	Experimental Investigation And Analysis Of E-Glass Fibre Reinforced Ipn Composite For Pipe Application	Suresh G	Dr.L.S.Jayakumari	08.06.2017
3	Studies on Mechanical and Dielectric properties of Natural Rubber blends and Nano composites	Ravi Kumar K	Dr.K Ravichandran	27.07.2017

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b. **M.E./M.Tech/M.Arch /./M.Plan./MBA./MCA**

Sl. No.	Title of the Thesis	Name of the Scholar	Name of the Supervisor	Month & Year of Viva-voce conducted
1	Study on Rice Husk Ash filled elastomer compounds	Albert Noble Einstien M	Dr. V.Subrahmanian	09.05.2017
2	Effect of tackifiers on SBS based hot melt pressure sensitive adhesives	Ashok K	Dr.B.Kothandaraman	09.05.2017
3	Study on Rheological behavior of SIS Based HMPSA	Gowri Shanker V C	Dr.V.Subrahmanian	09.05.2017
4	Mechanical simulation of Nitrile (NBR) O-ring by finite element analysis technique using hyperelastic and viscoelastic models	Kalaiyaran R	Dr.K.Ravichandran	09.05.2017
5	Optimization of Abrasion/Ozone crack resistance and Flexural Fatigue properties in EPDM with NR/BR in Tire sidewall application	Muthu Prakash M	Dr.V.Subrahmanian	09.05.2017
6	Compounding and properties of Natural Rubber Reinforced with DMAc/LiCl treated silica	Nithish V	Dr.N.Natchimuthu	09.05.2017
7	Electro chemical study of Rubber crumb based graphite electrode in different electrolytes	Santhosh K	Dr.L.S.Jayakumari	09.05.2017
8	Compounding and properties of Styrene-butadiene rubber reinforced with DMAc/LiCl treated silica	Vinoth Kumar M	Dr.N.Natchimuthu	09.05.2017

(c) **M.Sc. (2 years) / M.Sc.(5 years) programme : NIL**

Sl. No.	Title of the Thesis	Name of the Scholar	Name of the Supervisor	Month & Year of Viva-voce conducted
'Not Applicable'				

**Name of the Department: DEPARTMENT OF RUBBER & PLASTICS
TECHNOLOGY**

3. Sponsored Research Projects sanctioned during the period: **(01.07.2016 to 30.06.2017)**:

Sl. No.	Name of the Project	Name of the Coordinator	Rs.	Sponsoring Agency
'Not Applicable'				

4. Industrial Consultancy and Testing undertaken during the period: **(01.07.2016 to 30.06.2017)**:

Sl. No.	Title of the Consultancy	Name of the Co-ordinator	Rs. in lakhs	Sponsoring Agency
1.	Consultancy on Technical Validation (Tyre and Non-Tyre)	Dr.V.Subrahmanian	2,300.00	M/s. Rubber Skill Development Council, Delhi 110016
2.	Mechanical Testing of Cortical Bone Plates	Dr.N.Natchimuthu	5,520.00	Madras Veterinary College, Chennai 600 007

Name of the Department: DEPARTMENT OF RUBBER & PLASTICS TECHNOLOGY

5. Continuing Education Programmes:

5.1 Training Programmes / Short-term courses and Workshop **conducted** during the period **(01.07.2016 to 30.06.2017)**:

Sl. No.	Title of the Programme	Date	No. of Participants	Name of the Co-ordinator	Sponsoring Agency
1.	4 days Training programme on the Physics & Chemistry of Rubbers	December 2016	5	Dr. B. Kothandaraman	Self-Supporting

5.2 Training Programmes, Short-term courses **attended** by the Faculty members in other institutions during the period **(01.07.2016 to 30.06.2017)**:

Sl. No.	Name of the Faculty Member and Designation	Date	Name of the Continuing Education Programme /Training Programme attended	Venue
'Not Applicable'				

5.3 Conferences / Seminars / Symposia / Workshops **conducted** by the Department / Centre/ Institute during the period **(01.07.2016 to 30.06.2017)**:

Sl. No.	Names of the Conferences / Seminars / Symposium / Workshop conducted	Date	No. of participants	Venue	Sponsoring Agency
1.	Dynamic applications of Elastomers (DAE 2017)	25.03.2017	45	MIT	UGC

Name of the Department: **DEPARTMENT OF RUBBER & PLASTICS TECHNOLOGY**

6. **Faculty Development:**

6.1 Conferences / Seminars / Symposia / Workshops **attended** by the Faculty Members of Anna University at **National level** during the period **(01.07.2016 to 30.06.2017)**

Sl. No.	Name of the Faculty and Designation	Names of Conferences / Seminars / Symposia / Workshops attended	Date	Address of Organised Institute
1.	Dr. K. Ravichandran, Professor	National Seminar on Advanced Polymers - Gateway to Research and Industries APGRI-2017	22-23 September 2016	Meenakshi College for Women (Autonomous), Kodambakkam.

6.2 Conferences / Seminars / Symposia / Workshops **attended** by the Faculty Members of Anna University at **Inter National level** during the period **(01.07.2016 to 30.06.2017)**

Sl. No.	Name of the Faculty and Designation	Names of the Country Visited	Date	Name of Travel Grant Used	Purpose / Programme
Not Applicable					

6.3 Lectures **delivered** by the Anna University Faculty members during the period **(01.07.2016 to 30.06.2017)** :

Sl. No.	Name of the Faculty members and Designation	Department of Faculty members	Address of the Organised Institute	Month & Year	Name of the Programme
1.	Dr. B. Kothandaraman, Professor & Head	RPT	Kamaraj College of Engineering & Technology, Virudhunagar	October 2016	Rubber Product Manufacturing (RPM 2016)
2.	Dr. N. Natchimuthu, Professor	RPT	MIT	December 2016	Engineering Materials & Metallurgy
3.	Dr.K.Elangovan Assistant Professor	RPT	JNN Institute of Engineering, Chennai	March 2017	Guest Lecture on Processing & Characterization of Composite Construction Materials
4	Dr.K.Elangovan Assistant Professor	RPT	Kamaraj College of Engineering & Technology, Virudhunagar	April 2017	Guest Lecture on Mould & Die Design

6.4 Honours / Awards received from State / National / International bodies by the AU Faculty Members during the period **((01.07.2016 to 30.06.2017):**

Sl. No.	Name of the Faculty Member	Designation	Name of the Honours / Awards	Name of the Institution/Organization issued the Honours / Awards
Not Applicable				

**Name of the Department: DEPARTMENT OF RUBBER & PLASTICS
TECHNOLOGY**

7. Details of Visitors to the Departments/Centres/Institute other than Anna University Faculty during the period: **(01.07.2016 to 30.06.2017)**:

Sl. No.	Name of the Visitors	Full Address	Purpose of Visit	Date of Visit
1.	Dr.T.Narasimhaswamy	Senior Principal Scientist, Polymer Division, CLRI, Chennai	Inauguration of Elastoplaz'17	02.03.2017
2.	Aravind Kumar Chandiran	Asst.Professor IIT Madras	To deliver a Lecdture	02.03.2017

Name of the Department: **DEPARTMENT OF RUBBER & PLASTICS
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8. New Equipment / Instruments purchased costing more than **Rs.1.00 lakh** during the period **(01.07.2016 to 30.06.2017)**:

Sl. No.	Name of the Equipment /Instrument purchased	Features of Equipment/Instrument	Purchase cost (Rs. in Lakhs)
1.	Moving Die Rheometer	For measuring cure characteristics for a rubber compound and get an idea of dynamic properties	21.51
2.	Fatigue to Failure Tester	Cycle speed : 1.7 Hz, Test extension ratio: 1.6 to 2.4, Number of specimens which can be tested at a time : 24	17.75
3.	Flexometer	To measure heat build up of a rubber dynamic load along with $\tan \delta$ (tan delta) and blowout time according to ASTM D623 (Goodrich type flexometer)	23.54

**Name of the Department: DEPARTMENT OF RUBBER & PLASTICS
TECHNOLOGY**

9. Research Papers **Presented** in the **National** Conferences / Seminars / Symposia / Workshops during the period **(01.07.2016 to 30.06.2017)**:

Sl.No.	Name of the Conference and Title of the papers	Author's Name	Name and Addresses of Venue	Month & Year
not applicable				

10. Research Papers **Presented** in the **International** Conferences / Seminars / Symposia / Workshops during the period **(01.07.2016 to 30.06.2017)**:

Sl.No.	Name of the Conference and Title of the papers	Author's Name	Name and Addresses of Venue	Month & Year
1.	Fourth International Conference on Polymer Processing and Characterization	Dr. B. Kothandaraman	Mahatma Gandhi University, Priyadharshini Hills PO Athirampuzha, Kottayam, Kerala, India	December 2016
2.	Fourth International Conference on Polymer Processing and Characterization	Dr. K. Ravichandran	Mahatma Gandhi University, Priyadharshini Hills PO Athirampuzha, Kottayam, Kerala, India	December 2016

Name of the Department: DEPARTMENT OF RUBBER & PLASTICS TECHNOLOGY

11. Books / Journals Published during the period (01.07.2016 to 30.06.2017):

a) Books Published: NIL

Sl.No.	Name of the Book /Title	Author's Name	Name of the Publisher	Month & Year
Not Applicable				

b) Journals Published :

Sl. No.	Name of the Title	Author's Name	Name of the Publisher	Month & Year
1..	Studies on Aramid Short Fibers Reinforced Acrylonitrile Butadiene Rubber Composites	V. Subrahmanian, K.Elangovan, H.Sheik Mohammed	Indian Journal of advances in Chemical Sciences	Vol.4, Issue 4, PP 458-463(2016)
2.	Energy Efficient Functionalization of Low Tg Polymers and their Properties	V.Subrahmanian, H.Sheik Mohammed	Indian Journal of advances in Chemical Sciences	Vol.4, Issue 4, PP 440-448 (2016)
3.	Modification of Epoxy resin with Silicone Rubber and In-situ generated Alumina Silicates	D. Uma, D.Meenakshi, B. Kothandaraman and K.Ravichandran	Print Publications Pvt. Ltd.	Vol.33, Issue-2, PP:333-349 2016/08
4.	Eco-friendly cardanol-based phenalkamine cured epoxy-cenosphere syntactic foams: Fabrication and characterisation	M Kaur, LS Jayakumari	Journal of Applied Polymer Science	133 (46) 2016
5.	Novel bio-based epoxidized cardanol/cenosphere syntactic foams: Thermal, hygrothermal and compression characterization	M Kaur, LS Jayakumari	High Performance Polymers,	DOI No. 09540083166569 23, 2016
6.	Effect of Rockwool and Steel fiber on the Friction Performance of Brake Lining Materials	S Stephen Bernard, LS Jayakumari	Matéria (Rio de Janeiro)	21 (3), 656-665, 2016
7.	Analyzing the mechanical behavior of E-glass fibre-reinforced interpenetrating polymer network composite pipe	G Suresh, LS Jayakumari	Journal of Composite Materials	50 (22), 3053-3061, 2016
8.	Investigation on the swelling characteristic of NR/BR Rubber Blends	K.Elangovan, K.Sridharan	Journal of Chemical & Pharmaceutical	Vol 8 Issue 1 PP 553-557 (2016)

12. List of achievements during the period (01.07.2016 to 30.06.2017): NIL

