

**DEPARTMENT OF MECHANICAL ENGINEERING**  
**School of Engineering and Technology**  
**CHRIST (Deemed to be University), Mysore Road, Bengaluru - 560074**

Activity Report

**General Information**

Type of Activity	Workshop/Seminar/Conference/Training/Events*
Title of the Activity	How To Turn An Idea Into A Patent
Date/s	19 <sup>th</sup> November 2021 (Friday)
Time	11: 30 AM to 1:00 PM
Venue	Online (Cisco Webex)
Collaboration/Sponsor	NIL

**Speaker/Guest/Presenter Details**

Name	Dr K T Varughese
Title/Position	Director
Organization	CONCLAVIT, Bengaluru
Title of Presentation	How To Turn An Idea Into A Patent

**Participants profile**

Type of Participants	Student (PG)/Facultties/Research Scholars
No. of Participants	50

**Synopsis of the Activity (Description)**

Highlights of the Activity	<ol style="list-style-type: none"> <li>1. Demonstration of patent searching</li> <li>2. Patent drafting exercise and tips</li> <li>3. Question &amp; Answer session</li> </ol>
Key Takeaways	<ol style="list-style-type: none"> <li>1. The knowledge of developing small idea(s) into patents/copyrights</li> <li>2. Drafting of a patent</li> <li>3. The process of searching patents</li> </ol>
Summary of the Activity	The webinar has delivered the knowledge of how the simple but unique ideas/ thoughts can be turned into patents. The whole process of patent filing and the key points in drafting the patents has covered.
PO/PSO Attainment*	PO8 : Ethics PO12: Life-long learning
Follow-up Plan, if any	

**Rapporteur**

Name of the Rapporteur	Dr Jangam Sasidhar
Email and Contact No	Sasidhar.jangam@christuniversity.in, +91-8884639888

\* PO: Program Outcome, PSO: Program Specific Outcome

## Webinar on “How to Turn an Idea into a Patent”

A webinar on “How to turn an idea into a patent” was held on 19<sup>th</sup> November 2021 to wide spread the knowledge of patents and copyrights. The main objective of the webinar is to train the faculties and research scholars to convert their ideas or thoughts into patents or copyrights and to get legal protection for those in a simple way. The webinar was taken by Dr K T Varghese, Director of Conclavit on cisco WebEx and nearly 50+ participants joined the webinar.

The session started with the brief introduction about the esteemed speaker. The topics covered during the webinar were brief introduction of patents, patent law-India, drafting of patent, patent filing process, various stages of patent. Demonstration of patent searching, Patent drafting exercise and tips and Question & Answer session were the highlights of the session.

\* \* \*

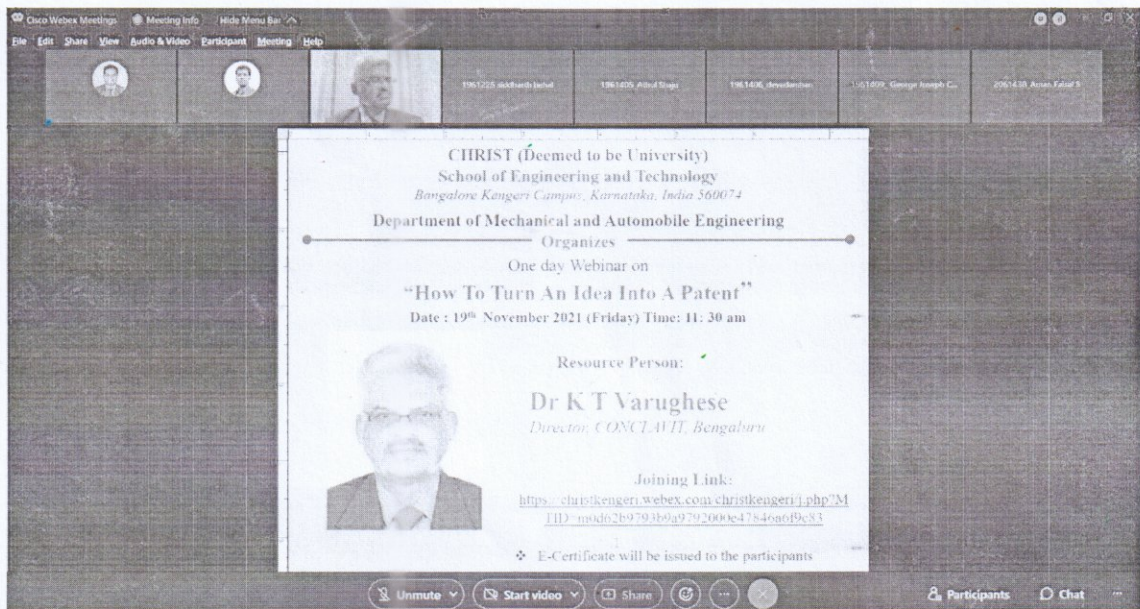
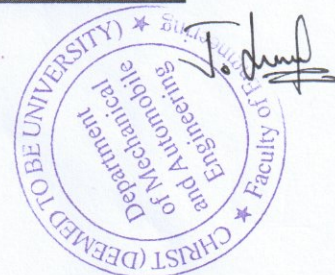


Figure.1: Screen shot of the webinar



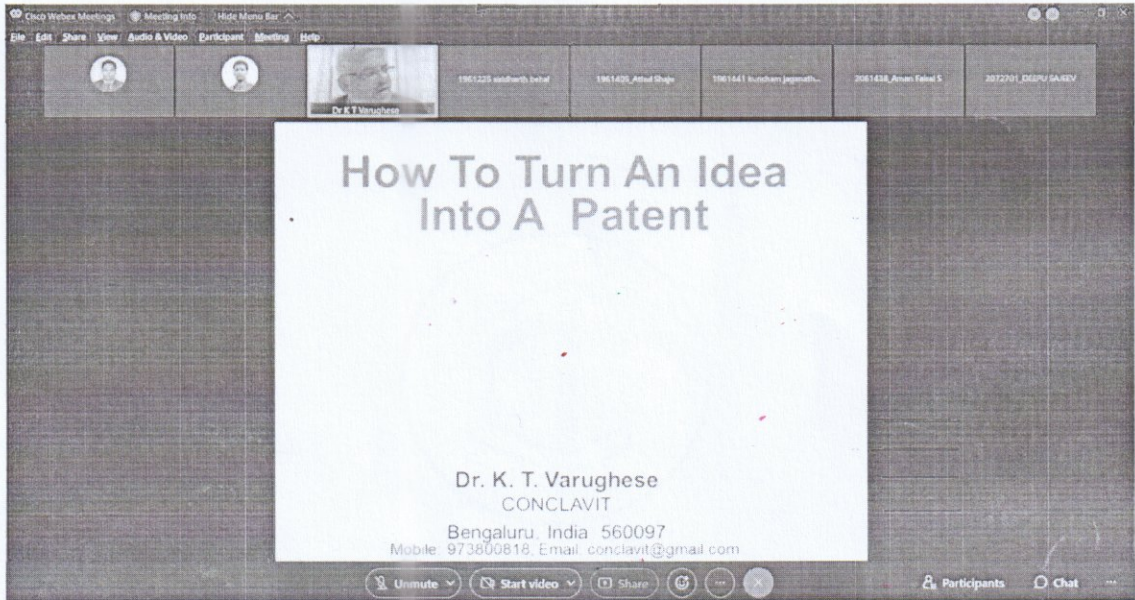


Figure.2: Screen shot of the webinar

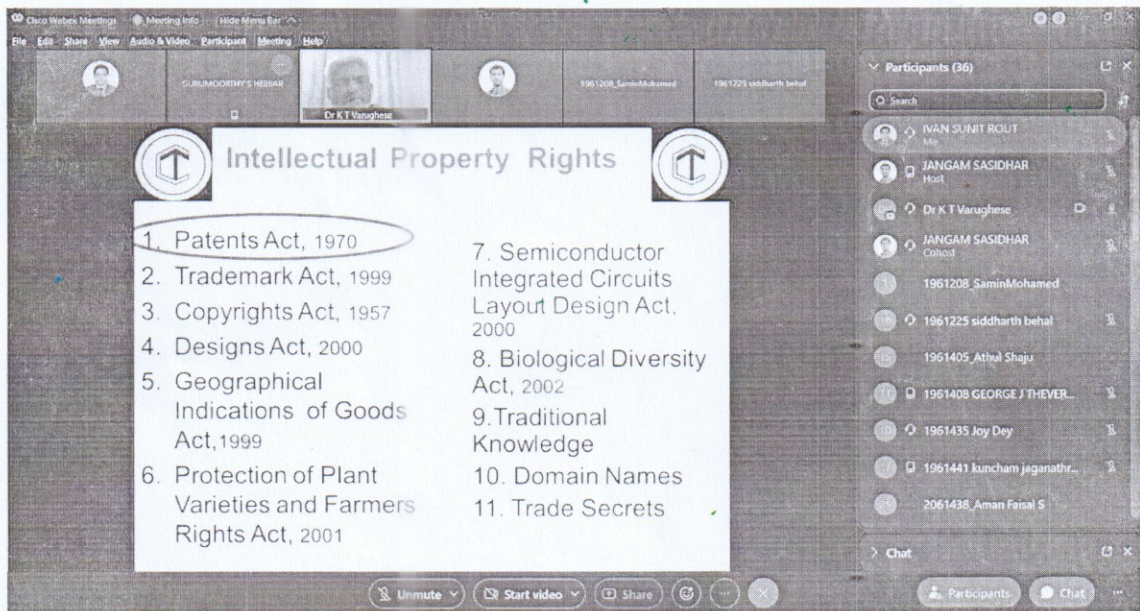
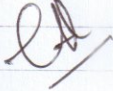

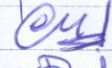


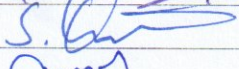
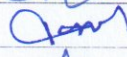
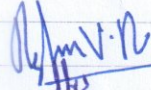
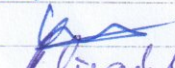
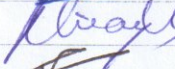



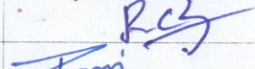
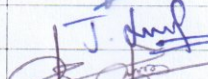
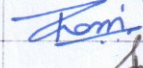



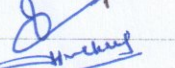
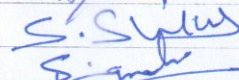
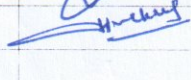

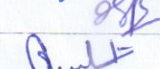



Figure.3: Screen shot of the webinar


*[Signature]*  
Head of the Department  
Mechanical and Automobile Engineering  
CHRIST (Deemed to be University)  
Bengaluru - 560 074

## List of Attendees


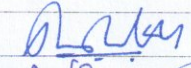


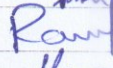
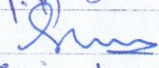
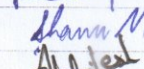
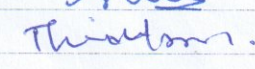


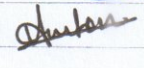
### Faculties

Dr. G S Hebbar		Prof. Ajith Gopinath	
Dr. Parvati Ramaswamy		Prof. Anil Melwyn Rego	
Dr. Parthasarathy		Prof. Darshan S M	
Dr. Pal Pandian P		Prof. Gowtham Sanjai S	
Dr. James S Kumar		Prof. Harish Kumar M	
Dr. Reghu V R		Prof. Kiran K	
Dr. Francis Xavier L		Prof. Nirajana S J	
Dr. Pradeep Kumar		Prof. Pritesh Hadiya	
Dr. Anil Raj		Prof. Ravichandran G	
Dr. Jangam Sasidhar		Prof. Ravikumar R	
Dr. Shijo Thomas		Prof. Thejaraju R	
Dr. Dileep V Nair		Prof. Umesh V	
Dr. Shivakumar		Prof. Vivek K S	
Dr. Sajna Parimita P			
Dr. Ivan Sunit Rout			
Dr. Ramesha K			

### Research Scholars/Research Fellows

Praise Tom	Attended online	Deepu Sajeev	Attended online
Raldo Paul K	Attended Online	Suneeth Sukumaran	Attended online
Avinash Babu		Nice Menachery	Attended online
Pratap Kumar J	Attended Online	Jagadeesh I. R	Attended online
Krishna Unni M	Attended Online		

### Students (PG)

Anshul Dahiya		Alan Prakash	
Gudla Rajini Rohith		Sakthi Praksh	
Paul B Thaliath		Srijan Dutt	
Syed Mohammed		Thiru Kumaran	
Akhilesh Rao			
Rohit B			
Antony Joel			



**CHRIST (Deemed to be University)**  
**School of Engineering and Technology**  
*Bangalore Kengeri Campus, Karnataka, India 560074*

**Department of Mechanical and Automobile Engineering**

**Organizes**

One day Webinar on

**“How To Turn An Idea Into A Patent”**

**Date : 19<sup>th</sup> November 2021 (Friday) Time: 11: 30 am**



**Resource Person:**

**Dr K T Varughese**

*Director, CONCLAVIT, Bengaluru*

**Joining Link:**

<https://christkengeri.webex.com/christkengeri/j.php?MTID=m0d62b9793b9a9792000e47846a6f9c83>

❖ E-Certificate will be issued to the participants

**Programs Offered**

BTech : Mechanical Engineering / Automobile Engineering/Robotics and Mechatronics

MTech : Machine Design

PhD : Mechanical Engineering

**Event Coordinators:**

*Dr Ivan Sunit Rout (+918457880745), Dr Jangam Sasidhar (+918884639888), Mr Punit Kongi*

**Dr Pal Pandian P**

*Program Coordinator*

*BTech Robotics and Mechatronics*

**Prof James Sathya Kumar**

*Program Coordinator*

*BTech Automobile Engineering*

**Dr G S Hebbar**

*Head of the Department*

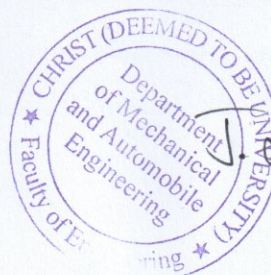
*Mechanical and Automobile Engineering*

**Dr Iven Jose**

*Dean*

**Dr Fr Benny Thomas**

*Director*





**Patent Mentor;  
Science Mentor;  
Research Advisor**

Formerly  
Group Head & Additional Director  
Central Power Research Institute  
(CPRI) Bengaluru, India

CPRI Services as Group A officer:  
November 1989-May 2020

### ABOUT IN BREIF

More than 37 years as Polymer  
/Rubber Scientist  
More than 30 years at CPRI, Bengaluru

Also held a honorary position as  
Ph.D.guide in Chemistry  
for more than 27 years  
at Mahatma Gandhi  
University, Kottayam,  
Kerala, India

Founder and Director,  
Conclavit, Bengaluru, Online Learning  
Center, Course Director of Simplified Patent  
Courses.  
<https://conclavit.com>

Contact:

11-Indian Express Layout  
Kodigehalli, Vidyanarayapura  
Bengaluru-560097,  
Karnataka, India

Email: drvarughese@gmail.com  
Phone, Cell: +(91) 9738008181

Total Working Experience as a Group A officer: Over 30 years(1989-2020)  
Total Research Experience : Over 37 years (Since 1984- )  
Research Experience as Ph.D. guide: Over 27years (1993- 2020)  
Ph.D. Awarded = 8 (As Guide and Signatory)+ 5 (Supervised on collaboration)  
Ph.D Examined= 8; Ph.D Chaired=3  
72 papers in International journals during 1987-2021.  
Citations: 4430 h-index:-31 i10-index=53 i100-index=15  
<https://scholar.google.co.in/citations?user=9XqBGr8AAAAJ&hl=en>

### PERSONAL

Age&Date of Birth: 61 Years: 26-May 1960  
Place of Birth: Thiruvalla, Kerala, India  
Religion: Christian, Marthomite  
Passport No. Valid upto Z4361562;08-August 2027, Bangalore

### EDUCATION

2007: P. G. Diploma in Intellectual Property Rights Law, NLSIU, Bengaluru  
1990: Ph.D: Science, Jadavpur University, India, April 1990  
Thesis: Polyvinyl Chloride/Epoxidised Natural Rubber Miscible Blends  
12 papers,1987-90)  
Research Supervisors: 1) Late Prof.S.K.Sanyal, JU, Dept. of Chemical Eng.(Former VIT)  
2) Prof. P.P.De, Rubber Technology Center, IIT, Kharagpur

1986-1989: SRF (Senior Research Fellow):-Rubber Technology Center,IIT, Kharagpur  
1984-1986: JRF (Junior Research Fellow): Polym.Sci.& Rubber Tech., CUSAT, Cochin

1982: M.Sc Chemistry, Agra University, India  
1980: B.Sc St. Thomas College, Kozhencherry, Kerala University  
1977: Pre-Degree Mar Thoma College, Thiruvalla, Kerala University  
1975: SSLC NSS-HS, Thadiyoor, Pathanamthitta, Kerala

### EXPERIENCE

1) June-2021 Founder and Director, Conclavit, Bengaluru, Organizing Conferences  
Conducting Online courses in Patents <https://conclavit.com>

2) 2016- 2020 Additional Director & Group Head, CPRI, Sadashivanagar,560088  
karnataka, India [www.cpri.in](http://www.cpri.in) Retired on 31 May 2020  
Joined on 30-Nov.1989 as Scientific Officer Grade 2

1989-2020: CPRI Responsibilities:

- i) Group Head 1) Dielectric Materials 2) Materials Technology  
3) Training Divisions and 4) Library and information Division
- ii) Additional Director, Head, Information & Publicity Division
- iii) Additional Director, Cables Division
- iv) Joint Director at the Divisions of (a) Dielectric Materials,(b) R&D Management,  
c) Cables, (d) Ultra High Voltage Research Laboratory  
v) Scientific Officer Grade 4 at Thermal Research Center, Nagpur.  
vi) Scientific Officer Grade 2,3,and 4 at Materials Technology/  
Dielectric Materials Divisions

- 3) 1989 (Sept.-Oct.):- Guest Faculty, MIT, Chennai, India
- 4) 1986-1989:- Senior Research Fellow, IIT, Kharagpur, India
- 5) 1984-1986:- Junior Research Fellow, CUSAT, Cochin, India

### AREAS OF EXPERTISE:

Electrical Testing and Certification as Per ISO/IEC 17025,17065. Technology Marketing  
Publicity, Polymer Science and Rubber Technology, Material Science & Engineering,  
Management, Patent Management/Intellectual Property Rights.

### ACADEMIC/SCIENTIFIC ASSOCIATIONS & TRAINING

- 1) 2019(Oct):- Associate Editor, Frontiers in Nanotechnology
- 2) Editorial Reviwer for International Publishers like Springer, Elsevier, Sage, Apple  
Science Etc.
- 3) 2016-2018-Member, Board of Studies, Aerospace Engineering, Adhyamaan Center  
of Engineering, Hosur.
- 4) 1993-2020: Research Guide in Chemistry, School of Chemical Sciences, Mahatma  
Gandhi University, Kottayam, Kerala, India  
Ph.D.Awarded: 8 as guide and Signatory in Dissertation + 5 as collaborator  
Ph.D.Dissertation Adjudicated as Examiner : 8



dielectric properties of plasticized poly vinyl chloride/MWCNT nanocomposites, *Functional Composites and Structures*, 1 (3), 035004(2019)

**PAPERS IN 2018(Ph.D Student: Elizabeth Francis)**

Francis, L Zhai, HC Kim, R Ramachandran, G Amarendra, GM Balerao, Morphology correlated free volume studies of multi-walled carbon nanotube plasticized poly (vinyl chloride) nanocomposites: positronium probes and electrical properties, *Polymer* 141, (2018) 232-243.

Francis, HU Ko, JW Kim, HC Kim, N Kalarikkal, K Varughese, J Kim, High-k dielectric percolative nanocomposites based on multi-walled carbon nanotubes and polyvinyl chloride, *Journal of Materials Chemistry C*, 6 (30), (2018)8152-8159.

**PAPERS IN 2017 (Ph.D Student: Deepalakshmi Ponnamma)**

Ponnamma, KT Varughese, MAA Al-Maadeed, S Thomas, Curing enhancement and network effects in multi-walled carbon nanotube-filled vulcanized natural rubber: evidence for solvent sensing, *Polymer International*, 66 (6), (2017)931-938.

**PAPERS IN 2016 (Ph.D Student: JP Jose, DPonnamma)**

P Jose, J. Abraham, H J Maria, K T Varughese, S. Thomas, Contact angle studies in XLPE hybrid nanocomposites with organic fillers, *Macromolecular Symposia*, 66-78 366 (1) (2016) 66-78

Deepalakshmi Ponnamma, Kishor Kumar Sadasivuni, KT Varughese, Sabu Thomas, Mariam Al-Ali AIMa'adeed, Natural Rubber/Carbon Nanotube Composites and Their Electronic Applications; Book Chapter: Flexible and Stretchable Electronic Composites, Springer International Publishing, (2016) 1-35

**PAPERS IN 2015 (Ph.D Student: Jini Varghese, DPonnamma)**

Free-volume correlation with mechanical and dielectric properties of natural rubber/multi walled carbon nanotubes nanocomposites; Deepalakshmi Ponnamma, Renjith Ramachandran, Shamima Hussain, R. Rajaraman, G. Amarendra, K.T. Varughese, S. Thomas; *Composites: Part A* 17(2015) 164-171

Ponnamma, Q. Guo, I. Krupa, M. Al-Maadeed, KT Varughese, S. Thomas, K.K Sadasivuni Graphene and graphitic carbon nanotubes filled polymer composites as potential sensors, *Physical Chemistry Chemical Physics*, 17 (2015) 3954-3981

Varghese, S Jasimudeen, KT Varughese Study of the dielectric properties of graphene/CuS/ZnO hybrid nanocomposites for high performance supercapacitor applications, *RSC Advances*, 5 (129), (2015) 107142-107149

J Varghese, KT Varughese/CuS/ZnO hybrid nanocomposites for high performance photocatalytic applications, *Materials Chemistry and Physics*, 167 (2015) 258-264

**PAPERS IN 2014 (Ph.D Student: JP Jose, DPonnamma)**

P Jose, L Chazeau, J Y Caveille, K T Varughese, S Thomas, Nucleation and Non-isothermal Crystallization Kinetics in Polyethylene/Zinc Oxide Nanocomposites, *RSC Advances*, 4(60), 2014 (31643-31651)

DPonnamma, S H Sung, J S Hong, K H Ahn, K T Varughese, S. Thomas, Influence of Non-covalent Functionalization of Carbon Nanotubes on the Rheological Behaviour of Natural Rubber latex Nanocomposites, *European Polymer Journal*, 50 (2014) 147-159

**PAPERS IN 2013 (Ph.D Student: PV Anil Kumar)**

PVA Kumar, SA Kumar, K T Varughese, S. Thomas, Permeation of Nitrogen and oxygen Gases through Ethylene Propylene Diene Terpolymer Blend membranes, *Separation Science and Technology*, 48 (3), (2013) 455-465.

**PAPERS IN 2012 (Ph.D Students: M.Jacob, B.John, PVA Kumar, Roslin A)**

Rosalin, A; Varughese, K T; Jayakumari, I ; Thakur, O P; Thomas, S Viscoelastic and thermal analysis of barium sodium niobate polystyrene nanocomposites: role of constrained polymer layer, *Materials Research Innovations*, 16, (4,) (2012)

Effect of Rubber-Filler Interaction on Transport of Aromatic Liquids through High Density Polyethylene/Ethylene Propylene Diene Terpolymer Rubber Blends, Anil Kumar P. V., K. T. Varughese, and Sabu Thomas, *Ind. Eng. Chem. Res. (American Chemical Society)* 51 (19), (2012) 6697-6704.

Transport properties of high-density polyethylene/ethylene propylene diene terpolymer blends, Anil Kumar, P. V.; Anilkumar, S.; Varughese, K. T.; Thomas, Sabu, *Journal of Materials Science*, 47, 7 (2012) 3293-3304

Wetting Properties of Barium Sodium Niobate Filled Polystyrene Nano Composites, Rosalin, Abraham, K T Varughese, Jayakumari Ilssac, Sabu Thomas, *Macromolecular Symposia*, 315(1) (2012) 1-14

Permeation of Chlorinated Hydrocarbon Vapors through High Density Polyethylene/Ethylene Propylene Diene Terpolymer Rubber Blend, PVA Kumar, SA Kumar, KT Varughese, S Thomas, *Separation Science and Technology*, 48 (2) 811-818

Transport behavior of aromatic hydrocarbons through high density Polyethylene/ethylene propylene diene terpolymer blends, Anilkumar, PV, Anilkumar S., Varughese K.T, Thomas, S. *Journal of Polymer Research*, 19(1) (2012)

Separation of n-hexane/acetone mixtures by pervaporation using HDPE /Ethylene propylene diene terpolymer blend membrane Kumar, P.V.A., Anilkumar, S., Varughese, K.T., Thomas, S. *Journal of Hazardous Materials*, 91 (2012) 336-342

**PAPERS IN 2011-2010 (Ph.D Students: M.Jacob, B.John, PVA Kumar, P.Thomas, V.Harish)**

The effects of blend ratio, compatibilization and dynamic vulcanization on permeation of gases through HDPE/EPDM blends, John, B., Thomas, S.P., Varughese, K.T., Oommen, Z., Thomas, S. *Journal of Polymer Research*, 18 (2011) 119

Thermo Mechanical Analysis of Lead Monoxide Filled Unsaturated Polyester based Polymer Composites for Coatings





ct or blend ratio, reactive compatibilisation and dynamic vulcanisation J.George, K. Ramamurthy, .Varughese & S.Thomas Journal of Polymer Science: Part B: Polymer Physics Edition 38(2000) 1104-1114  
Thermal Properties and Crystallisation behaviour of Polypropylene/nitrile rubber blends S.George, .Varughese & S.Thomas Polymer 41(2000) 5485-5503  
Dynamically vulcanized thermoplastic elastomer blends of polyethylene and nitrile rubber J.George, .Varughese & S.Thomas Polymer 41(2000) 1507-1517  
Molecular transport of aromatic solvents in Isotactic Polypropylene/ acrylonitrile-co- butadiene rubber blends S.George, K.T.Varughese & S.Thomas Polymer 41(2000) 579-594

#### PAPERS IN 1999-1996 (Ph.D Students: S.George, J.George)

Rheological behaviour of Isotactic Poly propylene/Nitrile Rubber blends: Effects of blend ratio, compatibilisation and dynamic vulcanisation S.George, K. Ramamurthy, J.S. Anand, G.Groeninckx, Varughese and S.Thomas. Polymer 40(1999) 4325-434453  
Dielectric behaviour of Polypropylene/ Nitrile rubber blends: effect of blend ratio and dynamic vulcanisation. S.George, K.T.Varughese & S.Thomas Journal of Applied Polymer Science. 73(1999) 255-270  
Dynamic Mechanical Properties of Isotactic Polypropylene/ Nitrile Rubber Blends: Effect of blend ratio, reactive compatibilisation and Dynamic Vulcanisation S.George, N.R.Neelakandan, K.T.Varughese & S.Thomas Journal of Polymer Science: Part B: Polymer Physics Edition 35 (1997) 2309- 232755.  
Fly ash as fine aggregate in polyester based polymer concrete. K.T. Varughese, B.K. Chaturvedi Cement and Concrete Composites, 18 (1996) 105-108  
Curing behaviour of isotactic polypropylene and nitrile rubber; Influence of blend ratio, morphology and compatibiliser loading, S.George, Prasannanakumari, P. Koshy, K.T.Varughese and S.Thomas, Materials 26 (1996) 51-58

#### PAPERS IN 1995 (Ph.D Students: S.George, J.George)

Morphology and mechanical properties and compatibilisation. S.George, R. Joseph, S.Thomas and Varughese. Polymer 36 (23) (1995) 4405-4416  
High Density Polyethylene/ Acrylonitrile rubber blends: Morphology, Mechanical properties and compatibilisation. J. George, K.T.Varughese, R. Joseph, S.Thomas. Journal of Applied Polymer Science 57 (1995) 449-465  
Tensile Impact strength of Blends of High Density Polyethylene and acrylonitrile butadiene rubber blends as a function of blend ratio and compatibilisation. J. George, L. Prasannanakumari, P. Koshy K. T. Varughese, S. Thomas. Polymer Plastics Technology and Engineering 34(4) (1995) 581-599

#### 12 PAPERS FROM OWN Ph.D Work During 1990-1987

Supervisors: Prof. SKDe and Prof.PPDe, IIT Kharagpur and Prof.SKSanyal, Jadavpur University  
Melt rheology of Plasticized Poly(vinyl chloride)/Epoxidised natural rubber miscible blends K. T. Varughese J. Applied Polymer Science 39 (1990) 205-224  
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