



S189

Report

Academic Year 2020-2021

Name of the Event: FDP on 'A Century of Polymer Science: Developments and Challenges'

Date: 17-08-2020 to 21-08-2020

Time: 2.30 am – 4.00 pm

Venue: Online via Google Meet

Organized by: Post Graduate Department of Chemistry, Vimala College (Autonomous)

No. of participants: 63

Report

The year 2020 marks the 100th anniversary of the publication of a ground breaking hypothesis that polymers consist of a very large number of covalently linked monomeric units. It was reported by Prof. Hermann Staudinger in his publication On Polymerization (Ber.Dtsch.Chem.Ges,53, 1073-1085, 1920). As a tribute to the great scientist **Prof. Hermann Staudinger**, Post Graduate Department of Chemistry, Vimala College (Autonomous) Thrissur organized a faculty development programme on the topic '**A century of Polymer Science: Developments and Challenges**' from 17.08.2020 to 21.08.2020

The National Level Online Faculty Development Program was organized for five days 17-08-2020 to 21-08-2020 by the Post Graduate Department of Chemistry, Vimala College (Autonomous) Thrissur with the financial assistance from Department of Science and Technology under DBT STAR college scheme. It was a virtual meeting through google meet. The programme was coordinated by Dr. Jiji Abraham (DBT Star College Scheme and Assistant Professor, Dept. of Chemistry, Vimala College). This course was aimed for teachers who are teaching various disciplines of science and engineering subjects in colleges or Universities. There were 70 number of participants completed this programme successfully.

Assessment Period (2016 – 2021)



VIMALA COLLEGE (AUTONOMOUS), THRISSUR

Brochure

VIMALA COLLEGE (AUTONOMOUS), THRISSUR, KERALA
NAAC Re-accredited COPA 3.5
College with Potential for Excellence
DET-STAR College

Post Graduate Department of Chemistry
organizes
FIVE DAYS ONLINE FDP ON
'A Century of Polymer Science: Developments and Challenges'
supported by
DET-STAR COLLEGE SCHEME
DEPARTMENT OF BIOTECHNOLOGY
MINISTRY OF SCIENCE AND TECHNOLOGY
GOVERNMENT OF INDIA

Celebrations of 100 years of Polymer Science
Join us on

17-21 August 2020
2.00-3.00 pm

Registration link: <https://forms.gle/GWq5jPtpvZwoW8X59>

17 August 2020

Prof. Dr. Sabu Thomas
Vice Chancellor,
Mahatma Gandhi University,
Kottayam, Kerala
"Evolution of Macromolecular Science"

18 August 2020

Prof. Jacques Desbrières
Emeritus Professor,
Université
DE PAUL ETIENNE DELANNOU,
France
"Biopolymers: Materials for wide applications"

19 August 2020

Dr. Deepalekshmi Ponnamm
Research Associate,
Centre for Advanced materials,
Qatar University, Qatar
"Polymer Nanocomposites as
Piezoelectric Nanogenerators"

20 August 2020

Prof. Gopinath S. Varghese
Department of Physics, University of
Houston, Texas, USA
"Solar energy conversion processes:
the roles of semiconducting materials
and nano-architectures"

21 August 2020

Dr. Robin Augustine
Senior Post Doctoral Researcher,
Biomedical Research Centre,
Qatar University, Doha
"Polymers in Tissue
Engineering and Wound
Healing"

A certificate will be
issued to participants
who attend the
sessions completely
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Vimala College (Autonomous) Thrissur
Faculty Development Programme
Day 1
AUG 17 2020
2 pm - 3 pm

PROF. SABU THOMAS,
VICE-CHANCELLOR,
MAHATMA GANDHI UNIVERSITY,
KOTTAYAM, KERALA, INDIA
EVOLUTION OF
MACROMOLECULAR SCIENCE

Vimala College (Autonomous) Thrissur
Faculty Development Programme
Day 2
18 Aug 2020
2pm - 3 pm

Prof. Jacques DESBRIÈRES
Emeritus Professor
University of Pau and Pays Adour (UPPA),
France
Biopolymers: Materials for wide
applications

VIMALA COLLEGE (AUTONOMOUS), THRISSUR
Faculty Development Programme
DAY 3
18 AUG 2020
2 PM - 3 PM

DR. DEEPALEKSHMI PONNAMMA
RESEARCH ASSOCIATE,
CENTRE FOR ADVANCED MATERIALS,
QATAR UNIVERSITY
Polymer nanocomposites as
Piezoelectric
nanogenerators

VIMALA COLLEGE (AUTONOMOUS) THRISSUR
Faculty Development programme
DAY 4
19 AUG 2020
9.30 TO 10.30 AM

PROF. GOPINATH S. VARGHESE
NANOMATERIALS AND DEVICES LABORATORY,
DEPARTMENT OF PHYSICS,
UNIVERSITY OF HOUSTON, TEXAS
Solar energy conversion processes: the
roles of semiconducting materials and
nano-architectures

VIMALA COLLEGE (AUTONOMOUS) THRISSUR
Faculty Development Programme

Dr. Robin Augustine
Postdoctoral Researcher
Mechanical Engineering Department
Biomedical Research Center,
Qatar University, Doha
POLYMERS IN TISSUE
ENGINEERING AND WOUND
HEALING
DAY 5
22 AUGUST 2020
2 PM - 3 PM

Assessment Period (2016 - 2021)



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Day 1 – 17.08.2020

Day 1 program began with a welcome address by Dr. Jiji Abraham, Asst. Professor, Department of

Day	Speaker	Topic
17-8-2020	Dr. Sabu Thomas Vice-Chancellor, Mahatma Gandhi University, Kottayam, Kerala, India -686 560	Evolution of Macromolecular Science
18-08-2020	Prof. Jacques DESBRIÈRES Emeritus Professor IPREM UMR5254 - UPPA/CNRS Technopole Hélioparc 2 avenue du Président Pierre Angot 64053 PAU CEDEX 09 Tél : +33 4 76 67 15 86	Biopolymers: Materials for wide applications
19-08-2020	Dr. Deepalekshmi Ponnammam Research Associate Center for Advanced Materials, Qatar University, Qatar	Polymer Nanocomposites as Piezoelectric Nanogenerators
20-08-2020	Prof. Varghese Oommen Nanomaterials and Devices Laboratory, Department of Physics, University of Houston, Texas 77204, USA.	Solar energy conversion processes: the roles of semiconducting materials and nano-architectures
21-08-2020	Dr. Robin Augustine Postdoctoral Researcher Mechanical Engineering Department Biomedical Research Center of Qatar University	Polymers in Tissue Engineering and Wound Healing

Chemistry Vimala College (Autonomous) Trissur. The meeting was presided by Dr. Sr. Beena Jose, Vimala College (Autonomous) Trissur. Prof. Dr. Sabu Thomas, Vice Chancellor, Mahatma Gandhi University Kottayam inaugurated the FDP programme. Prof. Thomas delivered a talk on the topic

Assessment Period (2016 – 2021)

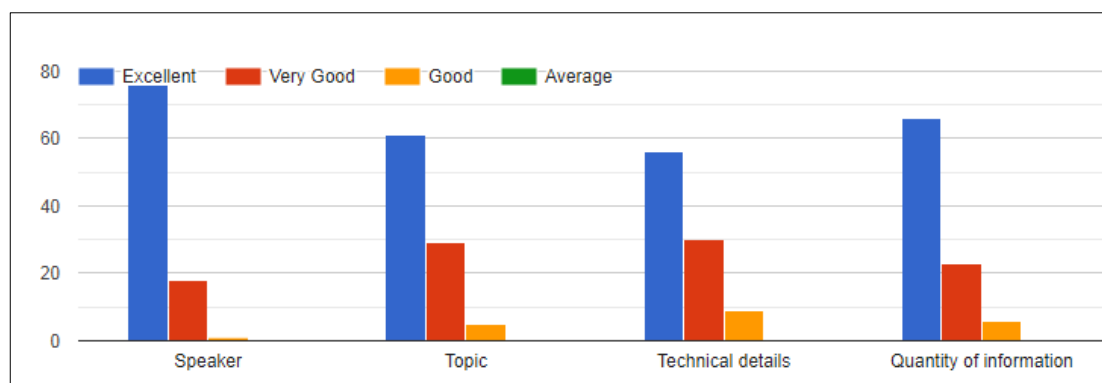


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Evolution of Macromolecular Science. In this lecture Prof. Thomas emphasized on the discovery of polymers, History, and their various applications. This session was chaired by Dr. Nancy Mathew.

Feedback Link

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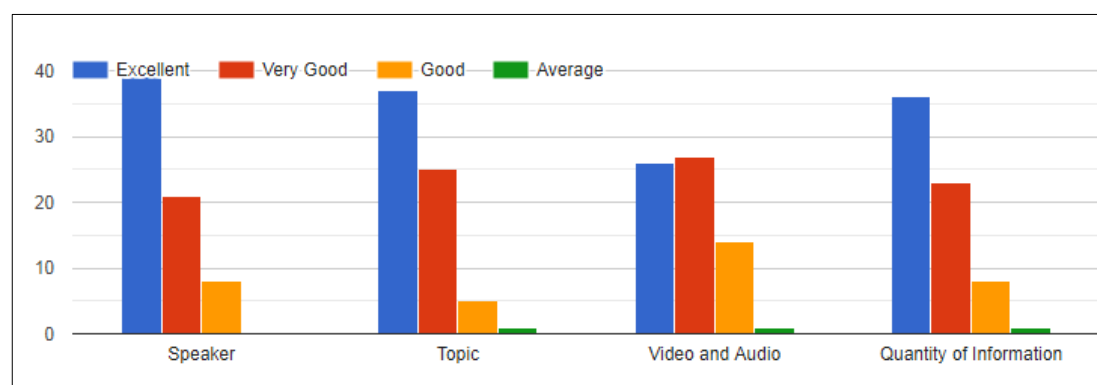


Day 2 -18.08.2020

In the second day of the programme, Prof. Jacques DESBRIÈRES has delivered a talk on Biopolymers: Materials for wide applications. Through this lecture participants got an overview of various biopolymers, their properties and applications. Dr. Jiji Abraham welcomed the gathering and Dr. Remya Govind proposed the vote of Thanks.

Feedback Link

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Day 3 -19.08.2020

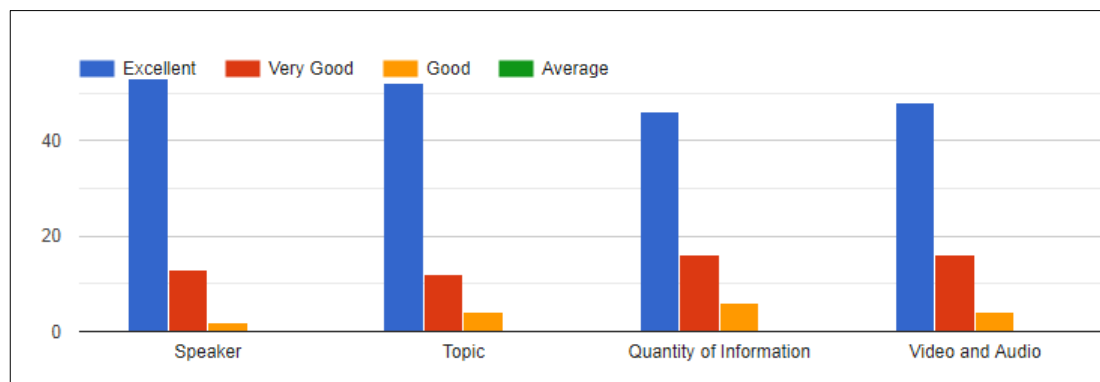
In the third day of FDP Dr. Bijoy P Mathew welcomed and introduced the speaker. Dr. Deepalekshmi Ponnammam. Dr. Ponnammam started the lecture on the topic Polymer Nanocomposites as Piezoelectric Nano generators from very basic idea of piezoelectricity. Dr. Ponnammam covers the area of polymers as piezoelectric nano generators. Dr. Srilekshmi P Bhaskar gave the vote of thanks

Feedback Link

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Piezoelectric Properties of PVDF-HFP/GTNT/SrTiO₃

Samples	Capacitance	d_{33}
PVP	803 pF	5.70 pC/N
PVP/GT1	930 pF	5.08 pC/N
PVP/GS11	987 pF	6.24 pC/N
PVP/GS12	1050 pF	7.52 pC/N
PVP/GS13	859 pF	5.94 pC/N

Sample containing 1:2 filler combination showed the best property

Participants: R, n, C, S, M, a

Day 4- 20.08.2020

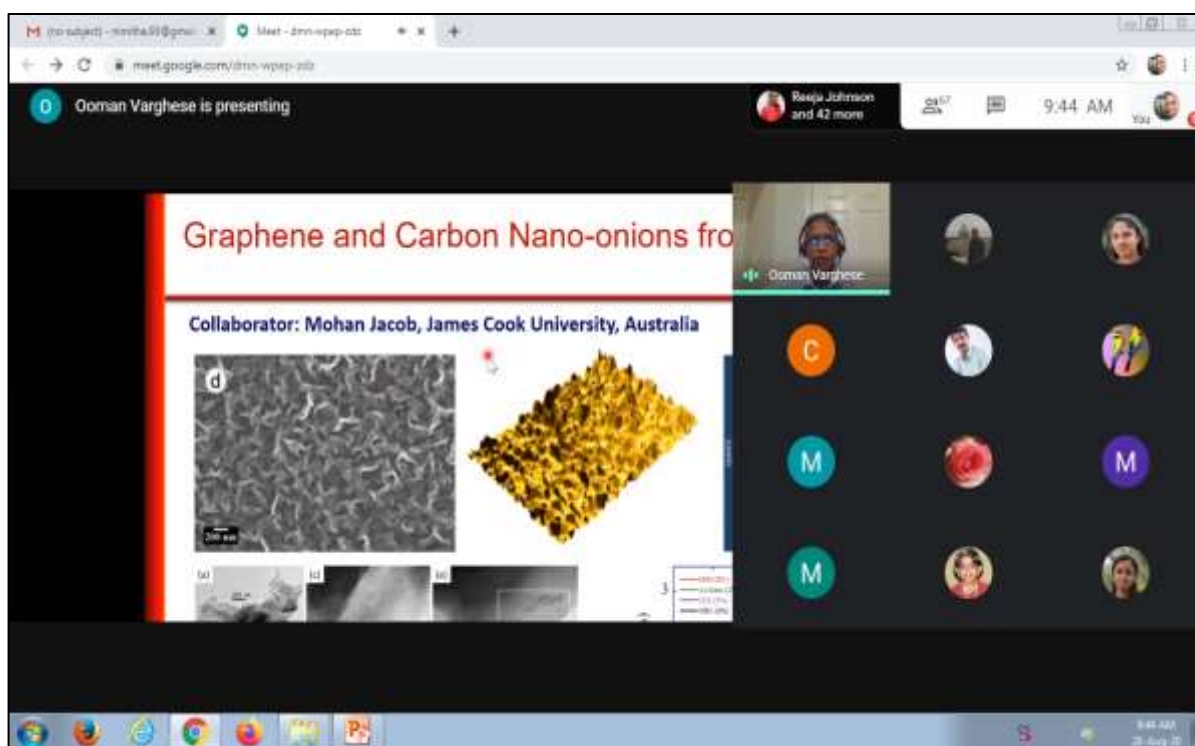
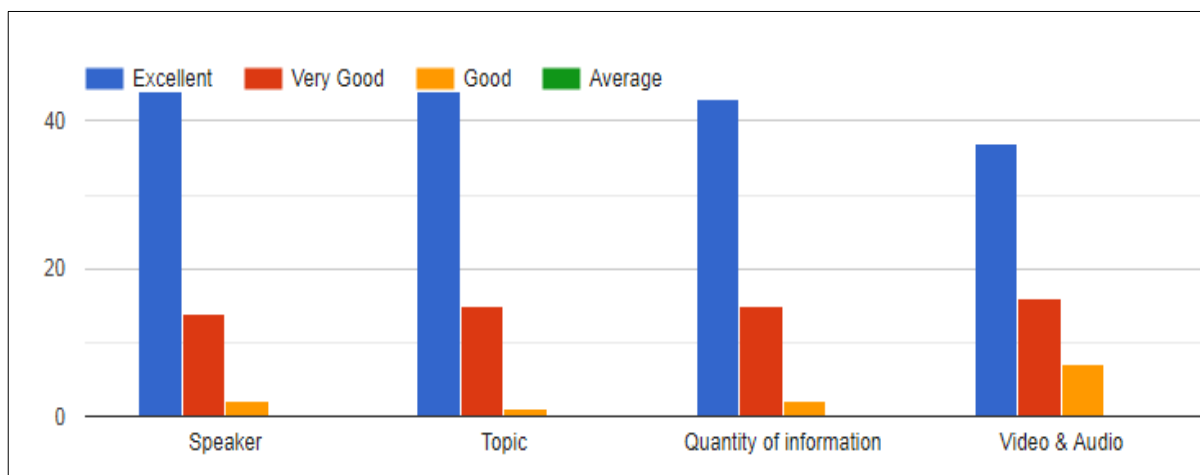
Day 4 program began with a welcome address and speaker introduction by Ms. Susan Samuel which was followed by talk by Prof. Varghese Oommen on the topic 'Solar energy conversion processes: the roles of semiconducting materials and nano-architectures'. In this session participants were learned the application of solar cell, installation of solar cell with minimum cost of materials and also to enhance the conversion efficiency of solar cells. Ms. Jidha K S chaired the session

Feedback Link

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Day 5- 21.08.2020

In the fifth day of FDP programm, Dr. Jiji Abraham welcomed and introduced the speaker, Dr. Robin Augustine. Dr. Augustine delivered a talk on Polymers in Tissue Engineering and Wound Healing. The programme ended with Vote of Thanks by Ms. Nimitha K C, Assistant Professor, Dept. of Chemistry. Feedback was received from the participants and E-certificates were sent to the participants by mail. On the whole the program was well appreciated by the participants

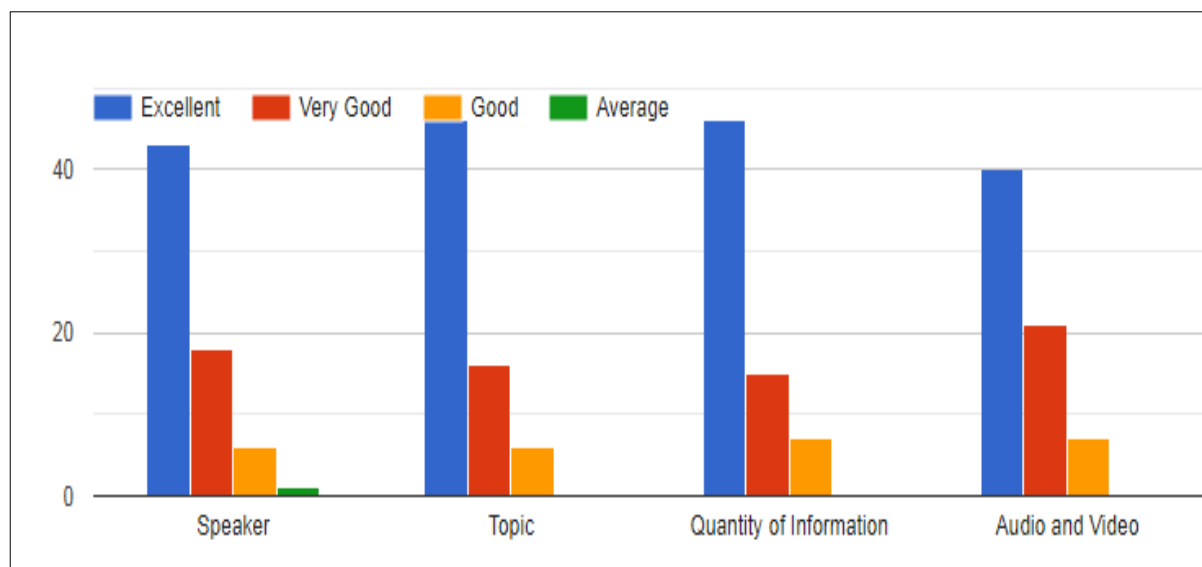
Feedback Link

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Assessment Period (2016 – 2021)



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Dr. Robin Augustine is presenting.

Biodegradation of scaffolds

High molecular weight polymer $\xrightarrow[\text{Enzyme}]{\text{Depolymerase}}$ Low molecular weight Oligomers, Dimers and Monomers $\xrightarrow{\text{Cellular metabolism}}$

Polycaprolactone

Polycaprolactone (PCL) $\xrightarrow{\text{Hydrolysis}}$ Polycaprolactone intermediate $\xrightarrow{\text{Hydrolysis}}$ Polycaprolactone acid

Extraction: Boil, Acid, Wash, Dry

Meeting details: People (7/7), Chat

Dr. Robin Augustine

Chemistry Department

PRIMA BENNY.C

People (7/7): Nandhu Kallathum (You), Anitha viji, PREESA PADILUNNASS, Anitha anitha, Anitha, Anitha, Anitha, Anitha



VIMALA COLLEGE (AUTONOMOUS), THRISSUR

List of Participants

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Assessment Period (2016 - 2021)



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