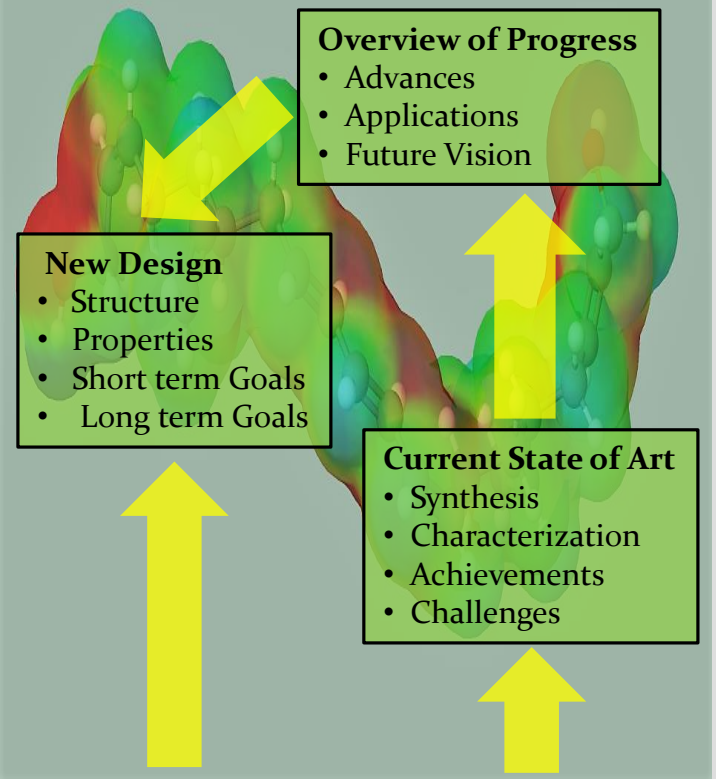
Focus of this Workshop



Overview of Progress
- Advances
- Applications
- Future Vision

New Design
- Structure
- Properties
- Short term Goals
- Long term Goals

Current State of Art
- Synthesis
- Characterization
- Achievements
- Challenges

Overlap with Theory/Modeling
- Background and Scope
- Design of new systems
- Structure-property dependence

Registration

There is no registration fee for participants. For students, boarding and lodging will be provided at UoH campus facility depending on availability. Please contact Dr. Balaka Barkakaty for registration and other information. Email: bbpsacrhem@uohyd.ac.in; Phone: +91-950-278-8966.

Advanced Centre of Research in High Energy Materials (ACRHEM)

Organizing Committee

Dr. K.Venkateswara Rao (Chairman)
Dr. Balaka Barkakaty (Convener)
Dr. Anuj A. Vargeese (Secretary)
Dr. Sudha Kumaraswamy
Dr. Rajashekhar Koorella
Dr. Kishore Babu N

ACRHEM
A DRDO Center of Excellence

ACRHEM, Univ. of Hyderabad, Prof . C.R.Rao Road, P.O. Gachibowli, Hyderabad 500046, India

University of Hyderabad

Workshop on Development of Binders and Plasticizers for Energetic Applications

December 15, 2017

Venue: Advanced Centre of Research in High Energy Materials (ACRHEM), University of Hyderabad, Hyderabad, INDIA

Topics of Interest:

- Recent Advances
- Next-Generation Materials
- Structure-Property Dependence
- Experiment-Theory Overlap

ORGANIZED BY

ACRHEM, DRDO Center of Excellence & High Energy Materials Research Laboratory (HEMRL), DRDO

ACRHEM is a DRDO supported Advanced Centre of Research in High Energy Materials, at the University of Hyderabad. This is the first Centre of its kind by DRDO in an Academic Institution. The objective of the Centre is to advance the study and research in the sciences pertinent to High Energy Materials.

This workshop on Development of Binders and Plasticizers for Energetic Applications aims to "connect multidisciplinary expertise in understanding the recent advances in this field including major breakthroughs, challenges, demands for future materials and scope for designing new materials through interdisciplinary approach".

Schedule of Events

Morning Session:

09:00 – 09:30 hrs

Inauguration: Director General (R&D), DRDO.
Chairperson: Shri K. P. S. Murthy, Director, HEMRL.

Presentations:

09:30 – 10:00 hrs

Recent Advances in Polymeric Binders and Plasticizers for High Energy Materials at ISRO. Mrs. Elizabeth John (VSSC-ISRO)

10:00 – 10:30 hrs

Application of Polymeric Binders/Plasticizers in High Energy Materials – Short Term and Long Term Goals. Dr. S. M. Pandey (HEMRL-DRDO).

BREAK: 10:30-10:40 hrs

10:40 – 11:10 hrs

Fluoroploymers for Strategic Applications. Dr. T. Shekharam (CSIR-IICT).

11:10 – 11:40 hrs

Synthesis and Properties of Functional (Per) Fluoropolyether Derivatives. Dr. P. Wadgaonkar (CSIR-NCL, Pune).

11:40 – 12:10 hrs

Experiment-Theory Overlap for Design and Development of Novel Polymeric Binders and Plasticizers for High Energy Applications. Dr. S. Radhakrishnan (HEMRL-DRDO).

BREAK: 12:10-12:25 hrs

12:25-13:25 hrs
Discussions: Chaired by Dr. S. N. Asthana, Retd. OS (HEMRL-DRDO).

Lunch: 13:25-14:30 hrs

Afternoon Session:

Presentations:

14:30 – 15:00 hrs

Bis-homocubanes as Possible Monomers to Synthesize Energetic Binders. Dr. I. N. N. Namboothiri (IIT-Bombay).

15:00 – 15:30 hrs

Next-Generation Energetic Binders and Plasticizers – Goals and Challenges. Dr. N. Sikdar/ Dr. J. Athar (HEMRL-DRDO).

15:30 – 16:00 hrs

Design of New Fluorinated and N-N Bonded Polymeric Binders for High Energy Applications. Dr. B. Barkakaty (UoH).

BREAK: 16:00-16:10 hrs

16:10 – 16:40 hrs

Functionalized HTPB for High Energy Applications. Dr. T. Jana (UoH).

16:40 – 17:10 hrs

Energetic Polyphosphazenes – Novel Polymeric Binder Systems for High Energy Applications. Dr. Muralidharan (UoH).

BREAK: 17:10-17:15 hrs

17:15-18:15 hrs
Discussions: Chaired by Dr. Manoj Gupta, OS (HEMRL-DRDO).