



## TechnologyMatchmaker on Renewable Chemicals and Materials (RCM)

### Showcase 1: Renewable Monomers, Polymers and Fuels

-- Organized by Techex.in --

<b>POTENTIAL GAINS</b>	<ul style="list-style-type: none"><li>• Listen to pitches for available technologies by the innovators from RCM domain.</li><li>• Hand holding by TechEx.in team for taking innovation to market.</li><li>• E-Meet and network with innovators, enthusiasts and experts from India and abroad.</li></ul>
<b>ORGANIZED BY</b>	<ul style="list-style-type: none"><li>• TechEx.in, a Tech transfer hub at Venture Center</li></ul>
<b>SUPPORTED BY</b>	<ul style="list-style-type: none"><li>• Venture Center</li><li>• National Biopharma Mission</li><li>• BIRAC</li></ul>
<b>FOR WHOM</b>	<ul style="list-style-type: none"><li>• Individuals interested in knowing about the technologies</li><li>• For startups, entrepreneurs, small/ medium size companies, large companies/ corporates, investors.</li></ul>
<b>WHEN</b>	<b>Friday, 9 April 2021   Time: 4.00 PM-7.00 PM (Indian Standard Time)</b>
<b>WHERE</b>	All sessions will be held on an online platform.
<b>CONTACT</b>	<p><b>Technical queries:</b> Ms Devanshi P.   <a href="mailto:devanshi@venturecenter.co.in">devanshi@venturecenter.co.in</a>   +91- 7410045655 Ms Pradnya A.   <a href="mailto:pradnya@venturecenter.co.in">pradnya@venturecenter.co.in</a></p> <p><b>Registration queries:</b> Ms Lipika B.   <a href="mailto:eventsdesk@venturecenter.co.in">eventsdesk@venturecenter.co.in</a></p>
<b>REGISTRATION</b>	<ul style="list-style-type: none"><li>• FREE and on a first come first served basis, <b>but registration is mandatory.</b></li><li>• <b>Register here:</b> <a href="https://tinyurl.com/techshowcases-april">https://tinyurl.com/techshowcases-april</a></li><li>• Tech Seekers (invitees and attendees) have an option to attend the event anonymously. To choose this option, please click the relevant tick box while registering.</li></ul> <p>Please note:</p> <ul style="list-style-type: none"><li>• The registered attendees will be sent the link to join the online session a day prior to the seminar.</li><li>• Organizers reserve the right to select participants so as to optimize the group for better interaction and ensure benefit to as many relevant participants as possible.</li></ul>



## Introduction

We aim to initiate technology matchmaking in RCM space. Showcase aims to facilitate technology matchmaking and potential tech transfer/ collaborative/ sponsored research projects.

## Showcase includes

- Welcome address from Director, VC
- Pitches by the innovators followed by a Q & A session
- Expert opinions

## Showcase 1 Schedule (Renewable Monomers, Polymers and Fuels)

Time	Duration	Session title	Speaker
4:00- 4:05 PM	5 mins	Introduction to Venture Center and TechEx.in	TechEx team
4:05- 4:15 PM	10 mins	Set the stage for the showcase	<ul style="list-style-type: none"> <li>• Premnath V, Director Venture Center</li> <li>• Devanshi Patel</li> </ul>
4:15- 4:25 PM	10 mins	Technology Title: CNSL derived novel, property-modifying difunctional (co)monomers for commercial polymers	Dr Prakash Wadgaonkar, CSIR-NCL
4:25- 4:30 PM	5 mins	Q & A	
4:30- 4:40 PM	10 mins	Technology Title: Bio-derived novel phenalkamines as curing agents for industrial coatings	Dr Anagha Sabnis, ICT Mumbai
4:40- 4:45 PM	5 mins	Q & A	
4:45- 4:55 PM	10 mins	Technology Title: Novel degradable polyoxalates from renewable monomers for coating and film applications	Dr Samir Chikkali, CSIR-NCL
4:55- 5:00 PM	5 mins	Q & A	
5:00- 5:10 PM	10 mins	Technology Title: Process for conversion of bio-derived Levulinic Acid to Gamma Valerolactone	Dr Kannan Srinivasan, CSIR-CSMCRI
5:10- 5:15 PM	5 mins	Q & A	
5:15- 5:25 PM	10 mins	Technology Title: CNSL derived novel initiators for solution polymerization of styrene-butadiene rubbers	Dr Prakash Wadgaonkar, CSIR-NCL
5:25- 5:30 PM	5 mins	Q & A	
5:30- 5:40 PM	10 mins	Technology Title: Bio-derived polyols with different hydroxylation levels for rigid PU foams and PU dispersions	Dr KI Suresh, CSIR NIIST
5:40- 5:45 PM	5 mins	Q & A	
5:45- 5:55 PM	10 mins	Technology Title: Bio-derived diacetals and polyacetals for modification of commercial polyacetals	Dr Samir Chikkali, CSIR-NCL
5:55- 6:00 PM	5 mins	Q & A	
6:00- 6:10 PM	10 mins	Technology Title: Bio-derived di-isocyanates drop-in replacement in polyurethanes production	Dr Prakash Wadgaonkar, CSIR-NCL
6:10- 6:15 PM	5 mins	Q & A	
6:15- 7:00 PM	45 mins	Concluding session - Comments from experts, Instructions for next steps, Vote of thanks	<ul style="list-style-type: none"> <li>• Dr S Sivaram</li> <li>• Dr Ashish Lele</li> <li>• Dr Darbha Srinivas</li> <li>• Dr Sanjay Nene</li> <li>• Dr Sandeep Kale</li> <li>• Dr Prakash Wadgaonkar</li> </ul>

**Speakers & Experts (in alphabetical order of last names)**



**Dr Samir Chikkali**  
Principal Scientist at CSIR-National Chemical Laboratory, Pune

Dr Chikkali's scientific interests are- functional olefin polymerization, renewables to polymers, Stereogenic supramolecular phosphines and asymmetric hydrogenation/hydroformylation. His honours and awards include, fellowship from Indian Academy of Science, DPI (Dutch Polymer Institute) postdoctoral fellowship, AvH (Alexander von Humboldt) postdoctoral fellowship, the Ramanujan (DST) Fellowship, Best Scientist Award by North Maharashtra University, Scientist of the Year Award 2016-2017 by NCL-RF and Young Associate of Maharashtra Academy of Sciences 2017. His research in organometallic catalysis has been rightly recognized by peers with top quality publications and has been equally applauded by industry with sponsored projects from Reliance Industries Limited (RIL), Hindustan Petroleum Corporation Limited (HPCL) and Gas Authority of India Limited (GAIL). His work has led to over 55 publications in international journals of high repute (including J. Am. Chem. Soc.; Macromolecules; Angew. Chem. Int. Ed.; J. Org. Chem.; Inorg. Chem.; Organometallics, Prog. Polym. Sci. etc), he is an inventor on 15 patents (including, WO, US, EP, JP, DE etc) and has edited a book.



**Dr Sandeep Kale**  
Founder, QbD Purple Advanced Technologies Pvt Ltd, Pune

Dr Kale is Managing Director at Qbd Purple Advanced Technologies Pvt. Ltd. He is M.Tech in Bioprocess Technology and Ph.D. (Tech) in Chemical Engineering from ICT, Mumbai. He has over 10 years of experience in technology development and translation with 25 patents. He has earlier worked as associate professor and coordinator of M Tech Bioprocess Program at ICT, Mumbai. He is recipient of 'Young Scientist Award in Biochromatography' from SBCN, France. He has also received Dr. PD Sethi award and Dr. R.K. Khanna Memorial award for best research papers. He has commercialized multiple technologies. At ICT, Mumbai he has guided 26 Masters and 11 PhD students. He has active collaboration with various industries in India and abroad. He has developed several new technologies for the industries e.g. herbal/natural products purification, Oil seed meal processing, various protein purification and hydrolysis, omega fatty acid purification by chromatography, glycerol refining, sugar and oligosaccharide purification, stevia extraction and purification, antioxidant extraction and purifications related to cancer, diabetes, inflammation, autism, skin care, brain development etc.






**Dr Ashish Lele**  
Director, CSIR-National Chemical Laboratory, Pune

Dr Lele has recently taken charge as the Director of CSIR-NCL, Pune. Prior to this, Dr Lele was Senior VP & Head, Advanced Materials and Alternative Energy Group at Reliance Industries Ltd.

Dr. Lele completed his Chemical Engineering graduation from the Department of Chemical Technology (ICT), University of Bombay, in 1988. He obtained Ph.D. in Chemical Engineering from the University of Delaware, USA in 1993. He joined CSIR-NCL in 1993 as a scientist and set up a research group on the rheology of complex fluids, polymer dynamics, and polymer processing. He led many industry-sponsored research projects at the laboratory and carried out several product development activities. He led the efforts for developing PEM fuel cell technology in a consortium of three other CSIR laboratories and three Indian industries.

Dr. Lele has authored 75 research papers in international peer-reviewed journals and 6 patents. He has supervised 17 Ph.D. theses.

	<p>Dr. Lele was the recipient of the Shanti Swaroop Bhatnagar Award in Engineering Sciences in 2006, Infosys prize in Engineering and Computer Science in 2012 and the ICT Distinguished Alumnus award in 2013. Other recognitions include CSIR Young Scientist Award (1994), INSA Young Scientist Award (1996), ICT Young Scientist Award (2003). He is a fellow Indian National Science Academy, Indian Academy of Sciences, and Indian National Academy of Engineering.</p>
	<p><b>Dr Sanjay Nene</b> <b>CEO and Founding Director at Innovation Biologicals, Pune</b></p> <p>Dr Nene is CEO and Founding Director at Innovation Biologicals, a startup incubated at Venture Center. He was with CSIR-NCL as Chief Scientist and Head of Biochemical Engineering Unit, Chemical Engineering &amp; Process Engineering Division. He is M.Tech (Biochemical Engineering) from IIT, Delhi and PhD (Tech:Chemical Engineering) from Mumbai University. His areas of expertise include production of vaccines and biologicals, fermentation for production of enzymes (CGTase, alkalineprotease, polyphenol oxidase), recombinant proteins (phytase and lactoferrin), chemicals from renewable resources (Lactic and Pyruvic acid), energy/bioremediation (Algal cultivation), recovery of natural products: Stevioside from Stevia leaves, processing of fruit juices and natural beverages (Neera) and membrane processing, chromatography, aqueous two phase extraction, biotransformation of drug intermediates etc.</p>
	<p><b>Dr V Premnath</b> <b>Director Venture Center, Head NCL Innovations, IP Group &amp; Scientist, Polymer Science Division, CSIR-National Chemical Laboratory Pune</b></p> <p>Dr V. Premnath is currently the Head, NCL Innovations – the group within National Chemical Laboratory (NCL), charged with the responsibility of championing the cause of technology innovation within NCL. He also provides leadership for the Intellectual Property Group at NCL – one of the India’s leading IP management group based out of research institutions. Dr. Premnath is also the Director of the Venture Center – a Technology Business Incubator at NCL campus. He is also a Scientist, Polymer Science &amp; Engineering Division at NCL with an interest in technology development for biomedical products.</p> <p>Dr. Premnath is the founder and first Director of Venture Center, CSIR-Tech (a technology commercialization company), Orthocrafts Innovations (degradable synthetic polymer based biomed products startup) and BiolMed Innovations (silk based biomaterials startup).</p> <p>Dr. V. Premnath holds a B. Tech. from the Indian Institute of Technology – Bombay and a Ph.D. from the Massachusetts Institute of Technology, USA. He has also been a Chevening Technology Enterprise Fellow with the Centre for Scientific Enterprises, London Business School and Cambridge University, UK. He brings with him considerable experience in technology development and commercialization (two successfully commercialized families of biomedical products), incubation and innovation management, working with startup companies (in Cambridge-UK and India) and engaging with large corporations on research and consulting projects as a project leader.</p>
	<p><b>Dr. Anagha S. Sabnis</b> <b>Professor at Department of Polymer &amp; Surface Engineering, Institute of Chemical Technology, Mumbai</b></p> <p>Dr Sabnis’s research areas of interest include anticorrosive coatings, bio-based renewable functional materials for coatings - Epoxy resins, Polyols, Polyamine cross-linkers developed from various vegetable oils and CNSL, recycling of PET/PU waste for coating applications, non-isocyanate polyurethanes for coatings, bio-based plasticizers for PVC, flame resistant coatings. She has been a Fellow of Chevening- Rolls Royce Research Science &amp; Innovation</p>



	<p>Leadership Fellowship by UK Government, recipient of 8th National Awards for Technology Innovation in Petrochemical &amp; Downstream Plastics Processing Industry Govt. of India ( Second Rank) and Recipient of 'Super Achiever Award for Excellence in research in Polymers and Paint Technology' by Indian Chapter (WISE) of International Network of Women Engineers and Scientists, which is an official NGO partner of the operational type with UNESCO.</p>
	<p><b>Dr Swaminathan Sivaram</b>  <b>Hon Prof &amp; INSA Senior Scientist, IISER Pune, Hon Prof IISER Kolkata, Ex-Director CSIR-NCL</b></p> <p>Dr Sivaram served as the eighth Director of National Chemical Laboratory (NCL), Pune (2002-10) and as CSIR Bhatnagar Fellow (2006-15) at NCL. Dr. Sivaram's research interests include polymer synthesis (cationic, anionic, GTP, Ziegler Natta, free radical and step growth polymerizations), high performance polymers; surface chemistry of polymers; porous polymers for energy related applications, biodegradable polymers, polymers from renewable resources, organic-inorganic hybrids and structure-property relationship in polymers.</p> <p>Dr. Sivaram is known for his pioneering work on alkylation of tertiary alkyl halides with trialkylaluminum and olefin polymerization and holds the highest number of US patents by an Indian working outside the US. He was awarded the Doctor of Science ( honoris causa) by Purdue University, USA in 2010. He is an elected Fellow of many prestigious academies of science and engineering in India, namely, Indian National Science Academy, New Delhi, Indian Academy of Sciences, Bangalore, National Academy of Sciences, Allahabad and Indian National Academy of Engineering, New Delhi. Dr. Swaminathan Sivaram was conferred with the Distinguished Alumnus Award, 1998 from IIT Kanpur.</p>
	<p><b>Dr Darbha Srinivas</b>  <b>CSIR-Bhatnagar Fellow, CSIR-National Chemical Laboratory, Pune</b></p> <p>Dr Srinivas is CSIR Bhatnagar Fellow at CSIR-NCL. Prior to this, he was the Chief Scientist and Head of the Catalysis and Inorganic Chemistry Division of CSIR-NCL. He worked as a scientist in the Inorganic Chemistry and Homogeneous Catalysis Division of CSIR-CSMCRI, Bhavnagar between 1988-97. He obtained his Masters Degree in Chemistry with Physical Chemistry as main subject from Andhra University, Waltair, India in 1980 and Ph.D. in Chemistry from Indian Institute of Technology (IIT), Chennai between 1986 – 87. His research interests include design of novel materials for catalytic applications, green chemistry, utilization of renewable feedstocks for chemicals and fuels synthesis, material characterization by spectroscopic techniques, mechanistic investigations and structure-function correlations. His group has developed several sustainable catalytic processes. The catalysts and processes for biodiesel and biolubricants have been licensed to US companies.</p>
	<p><b>Prof Dr Kannan Srinivasan</b>  <b>Director, CSIR - Central Marine and Salt Research Institute, Bhavnagar</b></p> <p>Dr Srinivasan research interests include: Layered double hydroxides (LDHs); Catalysis for fine and specialty chemicals, in particular for perfumery chemicals; Chemicals and fuels from bio-renewable; CO<sub>2</sub> utilization for chemicals; C-C bond forming reactions using solid base catalysis; Delamination of LDHs including polymer-LDH(bio-polymer) nanocomposites; Environmental remediation of anions. He has been an author of 80+ research publications over 2600 citations with h-index of 32, reviews, a book on catalysis entitled "Catalysts and Surfaces: Characterization Techniques", several book chapters and primary inventor of eight original patents which includes three granted US Patents (along with family of patents in 11 other countries like EU, China, CA).</p>



**Dr KI Suresh**

**Senior Principal Scientist, Materials Science and Technology Division, CSIR's National Institute for Interdisciplinary Science and Technology Thiruvananthapuram**

Dr Suresh's research interests include sustainable polymers, processes and products, specifically, - fundamental principles of macromolecular chemistry - recent development in macromolecular chemistry- the case of controlled radical polymerization and polymer nanocomposites - biomass derived feedstocks for polymers - Sustainable polymers-synthesis, polymerization and properties.



**Dr Prakash Wadgaonkar**

**Emeritus Scientist at Polymer Science and Engineering Division, CSIR-National Chemical Laboratory**

Dr Wadgaonkar has been with NCL since 1982. He is a Ph.D from Pune University. His areas of expertise include controlled polymerization methods, monomers and polymers from renewable resources, high performance polymers, polymers for optoelectronics, associating polymers, polymeric materials for gas separation, self-healing polymers, click chemistry, PDMS elastomers for maxillofacial prostheses and UV curable coatings. He has more than 200 publications and 20+ National and International patents to his credit. He has also been consulting various industries during his NCL tenure.



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	<p><a href="http://techex.in">TECHEX.IN</a> is a Technology Transfer Hub operated by Venture Center, Pune, India and supported by the National Biopharma Mission, BIRAC (Govt of India). TECHEX.IN aims to help technology developers and technology commercialization entities find each other's, forge partnerships and advance the technology closer to the market in a win-win partnership. In this mission, TECHEX.IN will build upon learnings, methods and experiences of NCL Innovations (department of CSIR-NCL championing innovations), IPFACE (IP Facilitation Center) and Venture Center (technology business incubator).</p> <p>The TECHEX.IN is based in the western part of India. While its focus is on organizations in Maharashtra, Gujarat and Goa states of India, it welcomes technology developers and technology commercialization entities from any part of the world. For more information please visit: <a href="http://techex.in">techex.in</a></p>
Supported by	
	<p>National Biopharma Mission (NBM) is a Mission of the Government of India approved by the Cabinet for implementation in May 2017. The NBM's mission is to make India a hub for design and development of novel, affordable and effective biopharmaceutical products and solutions. The NBM has an allocation of US\$ 250 million and is jointly funded by the Government of India and the World Bank in equal measure. The NBM is officially known as "An Industry-Academia Collaborative Mission of Department of Biotechnology (DBT) for Accelerating Early Development for Biopharmaceuticals". Biotechnology Research Assistance Council (BIRAC) is the implementation partner of the Government of India for the Mission. For more information, visit: <a href="https://birac.nic.in/nbm/">https://birac.nic.in/nbm/</a></p>
	<p>Biotechnology Industry Research &amp; Assistance Council (BIRAC) is a new industry-academia interface and implements its mandate through a wide range of impact initiatives, be it providing access to risk capital through targeted funding, technology transfer, IP management and handholding schemes that help bring innovation excellence to the biotech firms and make them globally competitive. For more information, visit: <a href="http://www.birac.nic.in">www.birac.nic.in</a></p>
	<p>Entrepreneurship Development Center (Venture Center) – a CSIR initiative – is a Section 25 company hosted by the National Chemical Laboratory, Pune. Venture Center strives to nucleate and nurture technology and knowledge-based enterprises by leveraging the scientific and engineering competencies of the institutions in the Pune region in India. The Venture Center is a technology business incubator supported by the Department of Science &amp; Technology's National Science &amp; Technology Entrepreneurship Development Board (DST-NSTEDB). Venture Center's focuses on technology enterprises offering products and services exploiting scientific expertise in the areas of materials, chemicals and biological sciences &amp; engineering.</p> <p>For more information, visit: <a href="http://www.venturecenter.co.in/">http://www.venturecenter.co.in/</a></p>