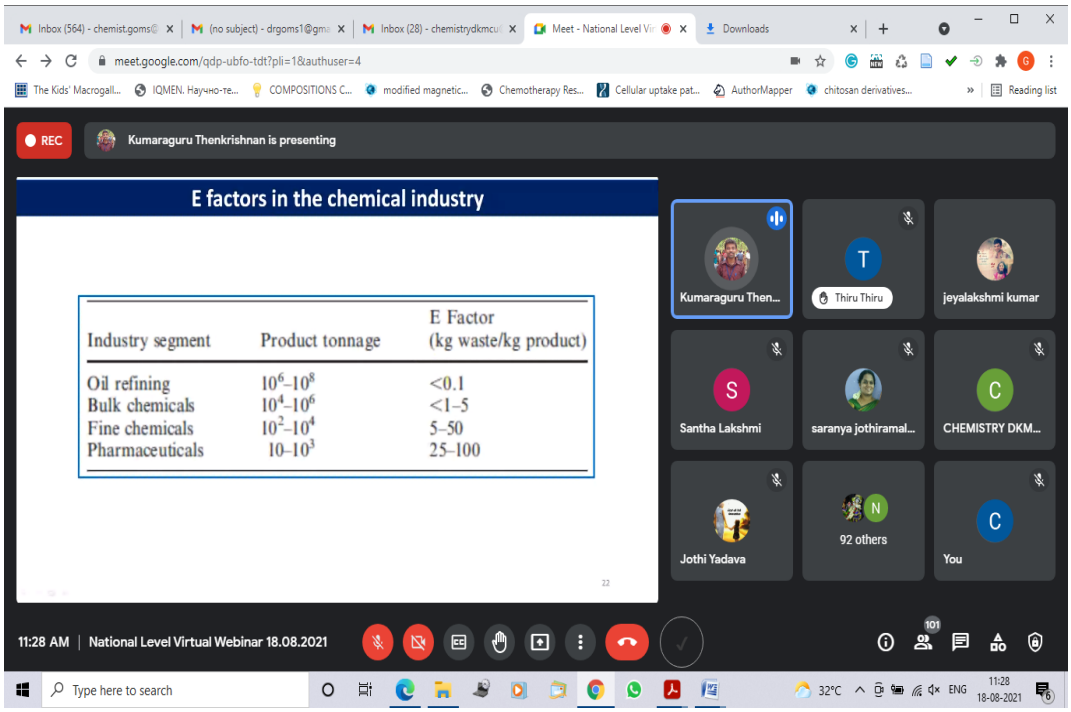
1. WEBINAR

RECENT TRENDS AND ADVANCES IN ORGANIC SYNTHESIS

In commemoration with Golden Jubilee year of celebration, Department of Chemistry has conducted a National level webinar in the topic "Recent Trends and Advances in Organic Synthesis" on 18th August, 2021 through Google Meet. Dr. T. Kumaraguru, Scientist, Biocatalysis lab, Department of organic synthesis & Process Chemistry, CSIR-Indian Institute of Chemical Technology, Hyderabad was the resource person. Totally 226 participants from this college and other colleges have actively participated in this webinar. The webinar was inaugurated by Dr. M. Nagarathinam, Associate Professor & Head, Department of Chemistry. She addressed the gathering with tremendous words in which she expressed her sincere gratitude. The welcome address and introduction of Chief Guest was done by Dr. S. Santha Lakshmi, Assistant Professor of Chemistry, D.K.M College for Women.

The Resource person of this webinar Dr. T. Kumaraguru has started the session with importance of fundamental research, technology, process development, advancements and improvements. He explained the chemical modern technology like chemocatalysis, flow chemistry, biocatalysis, etc. He highlighted the Design of Experiments (DOE) & Reaction Progress Kinetic Analysis (RPKA) and basic principles of Green Chemistry, atom economy, E-Factor, Process Mass Efficiency. He talked about the organic synthesis by mechanochemistry, flow chemistry, Biocatalytic kinetic resolution method.

Dr. T. Gomathi, Assistant Professor of Chemistry, proposed the vote of thanks to the Chief guests for their excellent talk and also thanked Management, Principal, Head and all the professors and students of Department of Chemistry.


REC
Kumaraguru Thenkrishnan is presenting
E factors in the chemical industry
Industry segment | Product tonnage | E Factor (kg waste/kg product)
Oil refining | 10^6–10^8 | <0.1
Bulk chemicals | 10^4–10^6 | <1–5
Fine chemicals | 10^2–10^4 | 5–50
Pharmaceuticals | 10–10^3 | 25–100
Kumaraguru Then...
Thiru Thiru
jeyalakshmi kumar
Santha Lakshmi
saranya jothiramal...
CHEMISTRY DKM...
Jothi Yadava
92 others
You
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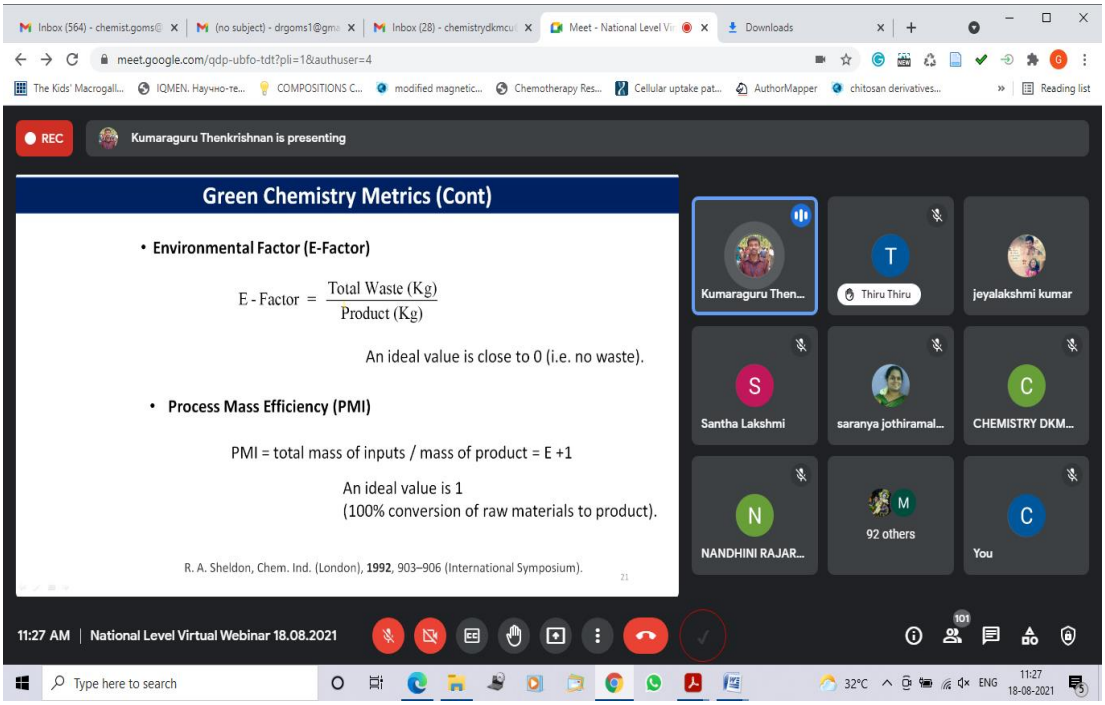
REC
Kumaraguru Thenkrishnan is presenting
Green Chemistry Metrics (Cont)
• Environmental Factor (E-Factor)
E - Factor = Total Waste (Kg) / Product (Kg)
An ideal value is close to 0 (i.e. no waste).
• Process Mass Efficiency (PMI)
PMI = total mass of inputs / mass of product = E +1
An ideal value is 1
(100% conversion of raw materials to product).
R. A. Sheldon, Chem. Ind. (London), 1992, 903–906 (International Symposium).
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