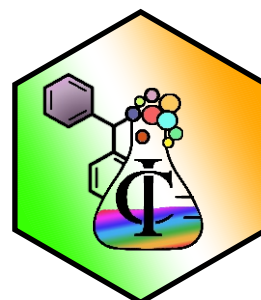


THE FINAL WORD

The official e-newsletter
of
Industrial Chemistry (IC) Department,
ISTAR, CVM University,
Vallabh Vidyanagar, Anand, Gujarat
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Edited by: Department of Industrial Chemistry
Prepared and Designed by: Ankit tivari (20IC10)

March-May 2021

M. Sc. Industrial Chemistry

Placement Details - 2021

Sr. No.	Name of the Company	Post Offered	No. of students
1	Lupin Ltd., Ankleshwar	Production Officer	9
2	Lupin Ltd., Dabhasa	Production Officer	3
3	Astral Adhesive, Ahmedabad	R & D Chemist	2
		Production Officer	4
		QC Chemist	2
		TSS	3
4	Royal Castor Products Ltd., Siddhpur	Production Officer	2
		R & D Chemist	2
		QA Chemist	1
5	Cadilla Healthcare(Zydus), Dabhasa	Production Officer	9
		QC Officer	5
6	Parshwnath Colorants, Dahej	Production Officer	4
		QC Officer	1
7	JDM Scientific Research	QC executive	1
		Production officer	1
8	Ashapura Minechem	QC Officer	2
9	Lewens Lab, Dahej	QA Executive	2
10	Rusan Pharma, Ankleshwar	QA Executive	3
	TOTAL		56

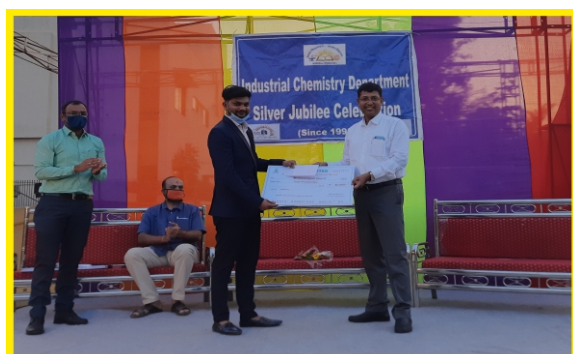
Industrial Chemistry Department

Farewell

Auspicious Evening With Lupin Ltd.



Lupin Ltd has given a scholarship of Rs.30000 to the topper



Mahavirsinh Gohil
Academic year 2019-2020



Sarjan S Soni
Academic year 2020-2021

Industrial Chemistry Department

Performance by Students



Science Manthan 2021 at CHARUSAT University (National level)

Students of 2nd Semester Participate in Nature Trail & Science talk

Institute of Science & Technology for Advance Study & Research
Constituent College of CVM University
1st Rank Engg. & Tech. Institutes in Gujarat by KGC (GSIRP)-2020
Recognized under Section 2(f) and 12(B) of the UGC Act, 1956

CHARUSAT
P.D. patel Institute of Applied Sciences Charotar University of Science and Technology (CHARUSAT)

Science Manthan 2021
Organizer

Topic: Melting of Asphalt

Name: VIRAJ J. PARMAR & ANKIT J. TIVARI

:TOPIC:

Melting of Asphalt

:Presented By:

**Viraj j parmar
Ankit t tivari**

Won 3rd prize in PG category

Industrial Chemistry Department



INSTITUTE OF SCIENCE & TECHNOLOGY FOR
ADVANCED STUDY & RESEARCH (ISTAR)



TOPIC

- **Pyrolysis process to produce fuel from plastic waste**

DEPARTMENT :- INDUSTRIAL CHEMISTRY

NAME :- PARTH K. PATEL



INSTITUTE OF SCIENCE & TECHNOLOGY FOR
ADVANCED STUDY & RESEARCH (ISTAR)



TOPIC

- **WASTE COTTON SEED OIL- AN ALTERNATIVE FOR PREPARATION OF COSMETIC PRODUCTS.**

DEPARTMENT :- INDUSTRIAL CHEMISTRY

NAME: ANJALI CHANDRAKANT PATEL



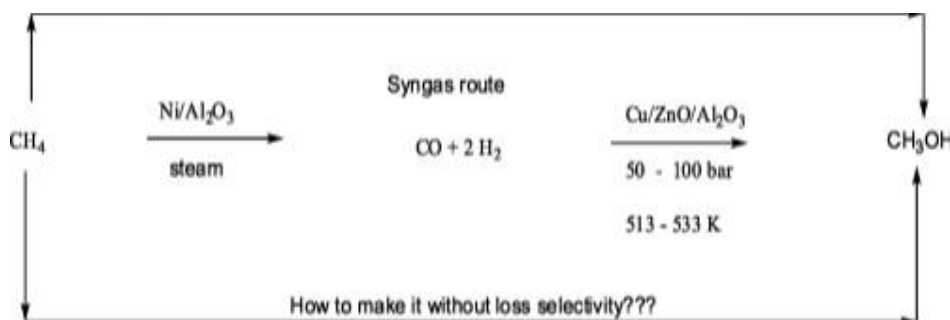
Carbon-neutral 'biofuel' from lakes

Summary:

Lakes store huge amounts of methane. In a new study, environmental scientists offer suggestions for how it can be extracted and used as an energy source in the form of methanol.

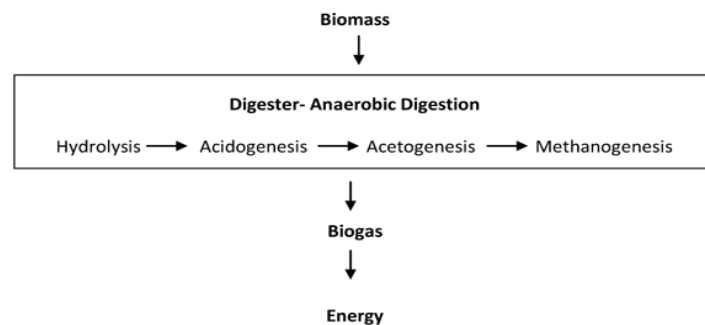
FULL STORY

Lakes store huge amounts of methane. In a new study, environmental scientists at the University of Basel offer suggestions for how it can be extracted and used as an energy source in the form of methanol.

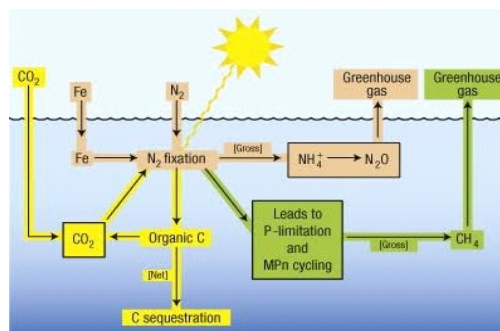


Discussion about the current climate crisis usually focuses on carbon dioxide (CO₂). The greenhouse gas methane is less well known, but although it is much rarer in the atmosphere, its global warming potential is 80 to 100 times greater per unit.

More than half the methane caused by human activities comes from oil production and agricultural fertilizers. But the gas is also created by the natural decomposition of biomass by microbes, for example in lakes. In their most recent publication, researchers at the University of Basel in Switzerland outline the potential and theoretical possibilities for using methane from lakes and other freshwater bodies for sustainable energy production.



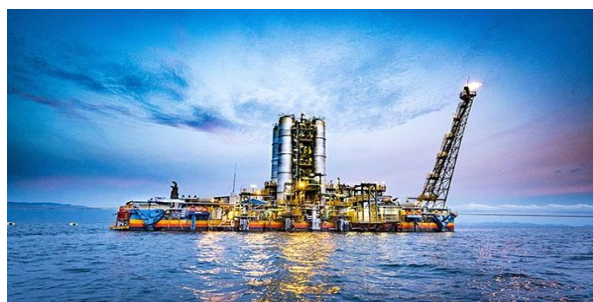
Methane from lakes and water reservoirs makes up about 20% of global natural methane emissions. "That would theoretically be enough to meet the world's energy needs," says Maciej Bartosiewicz, a postdoc in the Department of Environmental Sciences of the University of Basel. Lakes continuously absorb CO_2 from the atmosphere through the growth of phytoplankton. Microbes convert the carbon, fixed by photosynthesis, into methane when they process biomass. That way, carbon bound in the methane remains within the natural cycle during combustion. Fossil fuels could be partially replaced by "natural" renewable methane.



PRODUCTION OF METHANE FROM LAKES

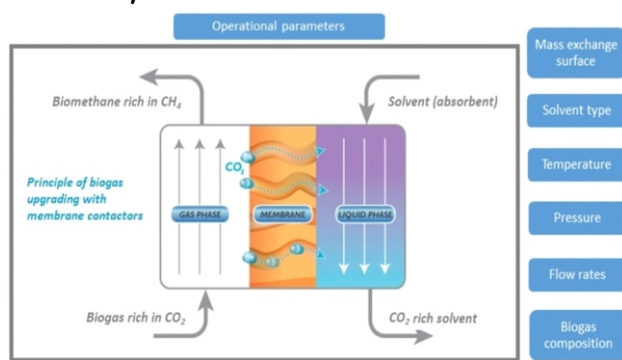
Lakes as huge energy stores

The idea described in the article isn't completely new: since 2016, methane in Lake Kivu between Rwanda and the Democratic Republic of Congo has been extracted from a depth of 260 meters, cleaned and used for energy supply directly via generators. "Methane occurs in high concentrations in large quantities on the lake bed there," explains Bartosiewicz. "The methane concentration is about 100 times higher than in ordinary lakes." Low concentrations made extracting methane from conventional lakes seem too technically difficult until a few years ago. But new microporous membranes made of polymeric materials now allow the gas to be separated from the water much more efficiently.



METHANE EXTRACTION PLANT IN LAKE KIVU

The researchers have made the first concrete proposals in this regard: using a hydrophobic gas-liquid membrane contactor, a methane-containing gas mixture can be separated from water and the methane concentrated. Zeolite minerals are particularly suitable for enrichment, since hydrophobic crystalline substances can adsorb and release gases.



GAS LIQUID MEMBRANE CONTACTOR

Potential positive effects on ecosystems

"With our idea, we wanted to start a broad discussion about the potential, feasibility and risks of a technology like this," says Bartosiewicz. "Until now, no studies have addressed the effects of methane removal on lake ecosystem functioning, but no immediate negative effects can be foreseen with our current understanding." However, removing excess carbon could even help curb excessive phytoplankton bloom formation and reduce natural greenhouse gas emissions from lakes. More work is needed before any practical implementation of this initial theoretical idea, says Bartosiewicz. But he's convinced: "This concept could one day make an important contribution to reaching our climate goals."

Viraj j parmar
(20IC92)