

CHEMICAL



SUSTAINABILITY





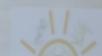


INTERNATIONAL SYMPOSIUM

16 December, 2023



RECENT TRENDS IN SUSTAINABILITY IN CHEMICAL SCIENCES



Organized by

Department of Chemistry
Sri Sathya Sai Institute of Higher Learn



01:03:26



Somenath Mitra (Guest) 06

A screenshot of a Microsoft Word document titled "Biofuels and Bioderived Products". The document contains a table with data on biofuel production in billions of barrels of oil equivalent per day. The table includes columns for Fuel Type, Country/Region, and Production (Bbls/d). The data shows significant production in the United States, Brazil, and India.

Fuel Type	Country/Region	Production (Bbls/d)
Bioethanol	United States	1.0
Bioethanol	Brazil	0.8
Bioethanol	India	0.5
Biodiesel	United States	0.4
Biodiesel	Brazil	0.3
Biodiesel	India	0.2
Biodiesel	China	0.1
Biodiesel	Other	0.1
Other	United States	0.1
Other	Brazil	0.1
Other	India	0.1
Other	China	0.1
Other	Other	0.1

Biofuels and Bioderived Products

- Fossil Fuels Still Supply 84 Percent Of World Energy - U.S. petroleum consumption 20.5 million barrels/day 2019
- According to US EPA projections, greenhouse gas emissions by 57 - 85%
- Global biofuel production in billions of barrels of oil equivalent per day - U.S. and Brazil produced 1.8 billion barrels in 2019
- Biodiesel, bioethanol, vegetable oils and fats, and lignocellulosic biofuels
- Important bioderived chemicals - glycerol, diol, triols, furfural, butane



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165 Views 6 Likes
Virgin Atlantic won a competition to receive government funding for the first net zero transatlantic flight

Somenath Mitra (Guest)

<https://www.statista.com/statistics/1014537/biofuels-and-bioderived-products-production-worldwide/>

fuel-production-in-oil-equivalent:



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...

Somenath ...

Dhurjati M...
Amitanand...

Dr.G.Pavan...

BRINDAVA...

View all







A case approach

	Knowledge	Attitude	Skills	Habits
Challenge	Distributional effects http://www.economics-ejournal.org/economics/journalarticles/2017-33/			
	• Membrane systems <ul style="list-style-type: none">Lower energy / temperature dynamicsquantum of solvents vis-a-vis membraneseparation factorsselectivity / CAPEX Opex/ less than 0.5% weak acid used			
	• Flexible packaging <ul style="list-style-type: none">Get away from fluoropolymersEnvironmental life time of plasticsRegulations & people movement			
	• EV / Health sector nexus <ul style="list-style-type: none">USD 12 billion profits by becomingGeographies / Energy, SPC, HealthESG / Reputational risk / REACH			
Solutions	Turners / Industry – Risk			
	• The Silent Spring			
	• Ozone Climate Nexus			
Results	Industry Right / CBAM			
	• IPCC employs > 200 scenarios for 1.5 °C			
	• Remaining C Budget 400-800 GtCO ₂			
Impacts	• 2000 scientists from 50 countries warn half by next decade			
	• https://www.nature.com/articles/d41586-019-0248-1			
	• https://unstats.un.org/unsd/methodology/websitemethodologies/default.aspx			



U.N. SUSTAINABLE DEVELOPMENT GOALS (SDGS) & CHEMISTRY



SUSTAINABLE DEVELOPMENT GOALS





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A Gateway to Sustainable Solutions through Green Hydrogen



A man wearing glasses and a light-colored shirt is standing behind a wooden podium, speaking into a microphone. He appears to be giving a speech or presentation.





INTERNATIONAL SYMPOSIUM ON “RECENT TRENDS IN SUSTAINABILITY IN CHEMICAL SCIENCES”

16th December, 2023









