



SRI SATHYA SAI INSTITUTE OF  
HIGHER LEARNING  
(Deemed to be University)

International Symposium  
on  
Chemistry for a Sustainable Future:  
*Bridging Science and Society*

13 November 2023

Sri S

DPCHEM  
Sri Sathya Sai Institute of Higher Learning  
Rasayana Vigyanam Draksharanika

Sri Sathya



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**International Symposium**  
on  
**Chemistry for a Sustainable Future:  
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**13-14 December 2024**



**Organised by:**  
Department of Chemistry  
Sri Sathya Sai Institute of Higher Learning  
Prasanthi Nilayam, Puttaparthi  
Sri Sathya Sai District, Andhra Pradesh - 515134

  
रासायन विज्ञान के विकास के लिए



**Day 1 - Session**



**13-14 December 2024**

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Day 1 - Session I  
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Department of Chemistry  
The Indian Institute of Space Science and Technology (IISST)

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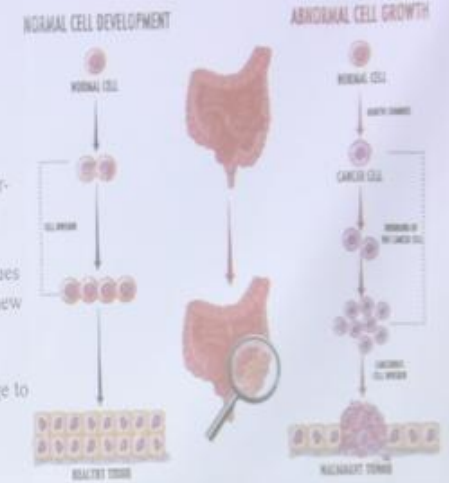

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*Unbound to the University*  
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## Understanding Cancer

- Cancer is one of the most complex diseases in the world.
- In 2022 almost 20 million cases of cancers were reported and around 19 million people died of cancer-related disease.
- Cancerous tumors spread into, or invade nearby tissues and can travel to distant places in the body to form new tumors (a process called metastasis).
- Despite various medical advancements, the challenge to treat these cancers remains.

### NORMAL CELL AND CANCER CELL DEVELOPMENT



Matthew Cole 2017, Normal and Cancer Cell in Lecture Illustration, Alamy <https://www.alamy.com>





### Continuous Flow Photochemistry

Manaswini Dusi, Suravee Rai, Subhashree P.S.  
Department of Chemistry  
Sri Sathya Sai Institute of Higher Learning, Anantapur

#### WHY GO WITH THE FLOW?



#### APPLICATIONS

Applications include:



Continuous flow photochemistry involves the flow of reactants through a reactor, exposed to light and controlled temperature, with the reactants collected continuously for efficient synthesis.



### Organic and Inorganic Chemistry

Genet's Institute for Department of Chemistry  
Sri Sathya Sai Institute of Higher Learning

#### What is solar cell?

A solar cell, also known as a photovoltaic or PV cell, is an electronic device that converts sunlight into electricity through a process called the photovoltaic effect. Solar cells are the building blocks of solar panel arrays.

#### Organic Cell

An organic solar cell (also known as OPV) is a type of solar cell where the absorbing layer is based on organic semiconductors (OSCs). Typically, these are either polymers or small molecules.



Material	Organic Solar Cell
Efficiency	~10-15%
Cost	Low (theoretically)
Flexibility	Highly flexible
Stability	Lower (degrades faster)
Environmental Impact	Low (non-toxic, low energy)

#### Building Integrated Photovoltaics (BIPV)



International Symposium on Chemistry for a Sustainable Future







