Report for Popular Talk

On

"Revolutionized Technology with Molecules for Sustainability"

Objectives

1. To commemorate the National Technology Day

2. To inculcate a scientific temper amongst the students that will enable them to take up research in future.

3. To familiarize the students with the latest developments in the field of Science and Technology.

Learning Outcomes

It is expected that the talk will instill curiosity amongst the students that may channelize them to take up research in basic Sciences. Their interaction with the Resource person have provided them some insights of the latest developments in his field of research and also made them aware of the opportunities available abroad in the research field.

The Department of Physics, Lady Keane College, Shillong organized a Popular Talk on "**Revolutionized Technology with Molecules for Sustainability"** on the 11th May 2023 to celebrate the National Technology Day. National Technology Day is celebrated every year in India on the 11th May 2023 to commemorate India's prowess in the field of science in general and nuclear technology in particular. India conducted a series of successful nuclear tests on May 1998 at Pokhran which puts the country amongst the elite nuclear clubs of the world. In recognition of the efforts put up by all the scientists and engineers involved in the nuclear tests, the then NDA Government under the leadership of the then Prime Minister Shri Atal Bihari Vajpayee declared 11th of May as the National Technology Day. Since then, every year the National Technology Day is celebrated across the country in various universities, colleges and schools by organizing seminars and symposiums to honour the contributions of scientists in various fields of science and technology. The Department of Physics, Lady Keane College since the year 2022 has decided to commemorate this day by organizing a Popular Talk on any contemporary topic in Physics. The topic for this year's Popular Talk was on "**Revolutionized Technology with Molecules for Sustainability" by Dr Lalminthang Kipgen as our esteemed**

Resource Person. The theme for this year's National Technology Day is "School to Starups-Igniting Young Minds to Innovate". The total number of participants was forty including students and staff from the departments of physics, chemistry and mathematics.

Dr. Lalminthang Kipgen completed his B. Sc from St. Edmund's College, Shillong and his M. Sc from North Eastern Hills University, Shillong. Then he completed his M. Tech from the Indian Institute of Technology, Delhi in 2011. He continued in the Department of Physics, IIT Delhi as a research assistant from 2012 to 2014.

Dr. Kipgen completed his Ph.D from Free University Berlin, Germany in 2019. He has had research experiences abroad as a postdoctoral researcher in the department of Physics at Free University Berlin, Germany from 2019 to 2020 and again as a postdoctoral researcher at MPQ Laboratory, University of Paris, Paris, France from 2020 to 2022. In his career, Dr. Kipgen had published 13 articles in high-impact peer-reviewed International journals.

The session was chaired by Mr. D. D. Wahlang, Assistant Professor, Department of Physics, Lady Keane College. The welcome speech was addressed by respected Principal of the college, Dr. D. K. B. Mukhim and the Resource person was introduced by the Head of the Department of Physics, Lady Keane College, Prof. B. Kharkamni.

Dr Kipgen's talk was divided into three sections. In the first part of his talk, Dr Kipgen open up his talk to discuss the impact of Si-based information technology on human civilization. As we move forward, IT will play an even greater role in our lives, especially with recent breakthroughs in Artificial Intelligence (AI) and the Internet-of-Things (IoT). However, the increasing energy consumption by the IT sector requires us to explore alternative technology frameworks that are more energy-efficient, affordable, and powerful than the current Si-based IT to ensure sustainability. His talk focused on a research area that uses molecules to replace or complement the existing technology. Molecules are the smallest unit of matter with structures and properties that can be customized in countless ways. By harnessing this, one can create multifunctional devices. His presentation was based on his research work in Berlin and postdoctoral work in Paris.

The second part of his talk, Dr Kipgen discussed the role of research as a career option for the students. We hope that Dr Kipgen's research experience will channelize some of our students to take up research in Basic sciences in the near future.

The third section of Dr Kipgen's talk strikes a very important chord with today's Age of Artificial Intelligence which is quite relevant in today's modern world. From autonomous driving cars such as Tesla to the open AI such as Chatgpt, the resource person highlighted the role they are going to play in various fields of education and industry. The presentation was followed by an interaction session between the students and our esteemed resource person. The talk concluded with a vote of thanks by Dr Bioletty Lawriniang, Assistant Professor, Department of Physics, Lady Keane College, Shillong.

The total expenditure incurred for the talk was Rs 8820/- (Rupees Eight Thousand Eight Hundred and twenty).


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EXCELLENCE
with
INTEGRITY
Vision
Mission


Since then, the number of transistors on a chip has been increasing exponentially by reducing the size of transistor
Transistor size in 1959 — 10 micrometer
Transistor size now (MacBook M1) — 5 nm

Attendance sheet of students for the Popular Talk on "Revolutionizing Technology with Molecules for Sustainability" as part of the National Technology Day 2023 Celebration held on 11.05.2023 organised by Department Of Physics, Lady Keane College, Shillong

Sl. No.	Name	Roll No.	Semester	Department	Signature
1	Aibandari. Marbaniang	37	II Semester	Physics	A Marbaniang
2	Sophia. L. Nonglait	39	"	"	Shyngdoh.
3	Rosaleen Lyngdoh Pyngrope	135	4th Semester	"	[illegible]
4	Tracy Oinam	179	4th Semester	"	Tracy O
5	Manisha Sarma	127	4th Sem	"	Manisha Sarma
6	Emika Lynshiang	122	"	"	Lynshiang
7	Daphisha Snaitang	93	"	Mathematics	D. Snaitang
8	Erika Gloria Jakai	30	BSc II SEM	Mathematics	Jakai
9	Hanashisha Marbaniang	66	"	"	H Mniang
10	Haphilariewkos Kharnaori	31	"	"	H. Kharnaori
11	Ilarisha Mawlong	22	"	Chemistry	I. Mawlong
12	Venisha Nongbet	36	"	Mathematics	V Nongbet.
13	Phibapyntngen Lyngdoh Nongbri	24	"	Chemistry	Nongbri
14	Lahunshisha War	57	BSc VI Sem.	Mathematics	L.war
15	Queenie. Mary. Majaw.	61	"	"	Q. Majaw.
16	Sakhiwonki Mawlong	62.	"	"	S. Mawlong.
17	Habung Ampi	124	B.Sc 4th Sem.	Physics.	habung Ampi
18	Badarishisha Shabong	54	B.Sc 6th sem'	Mathematics	B.Shabong
19	Jabhalang Marbaniang	55	"	"	Marbaniang
20	Pynsuklin Mawlong	60	"	"	P.Mawlong
21	Lissaba. Khongjah	107	"	"	L.Khongjah
22	Phindarishisha Kharbangar	59	"	"	P.K.bangar
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