

## **Fatima College (Autonomous), Madurai 18**

### **Department of Physics**

**Title** : Guest Lecture on “X RAY POWDER DIFFRACTION”  
**Date** : 14th August 2019  
**Resource Person** : Dr. C. Sanjeeviraja, Emeritus Professor, Dept. of ECE, Alagappa Chettiar Govet. College of Engineering & Technolgy, Karaikui  
**No. of Participants** : 95  
**Focus on** : **Entrepreneurship & Skill Development**  
**Outcome** :

- **This talk was extremely useful. The participants learnt about the techniques of powder diffraction using X-ray**
- **This technique is carried out on powder or microcrystalline samples for structural characterization of materials and has a wide range of applications in geology, material science, environmental science, chemistry, forensic science, and the pharmaceutical industry, among others.**
- **This will enable students to explore this field for research, higher studies and entrepreneurship.**

#### **Report:**

Dept of Physics organized a Guest Lecturer on the title “X RAY POWDER DIFFRACTION” on 14<sup>th</sup> August 2019 held in Smart room at Fatima College Premises. DR.C.SANJEEVIRAJA, EMERITUS PROFESSOR,, DEPT. OF ECE, ALAGAPPA CHETTIAR GOVT. COLLEGE OF ENGINEERING & TECHNOLOGY, KARAIKUDI gave a guest lecture on powder diffraction using X-ray, a technique carried out on powder or microcrystalline samples for structural characterization of materials. He introduced the concept of diffraction and described how the analysis of a sample by powder XRD provides important information that is complementary to various microscopic and spectroscopic methods, such as phase identification, sample purity, crystallite size, and, in some cases, morphology. He threw light on basics of single crystal crystallography where a high quality single crystal is grown and placed in different orientations in the x ray beam. The resulting diffraction patterns give the positions of the spots that give information on the crystal lattice symmetry and dimensions, while the intensities can be analysed to determine the atomic positions within each unit cell. He also described how the shapes and widths of individual peaks can be analysed to determine the details of crystallite sizes, microscopic strains and defects. Nearly 95 students participated and they this talk was extremely useful as the technique has wide range of applications in geology, material science, environmental science, chemistry, forensic science, and the pharmaceutical industry, among others.

# ***FATIMA COLLEGE (Autonomous)***

*College with Potential for Excellence*

*Re-Accredited with 'A' grade by NAAC(3<sup>rd</sup> cycle)*

*Mary land, Madurai - 18.*



## **UG & PG PHYSICS ASSOCIATION ORGANISES GUEST LECTURE**

**by**

**DR.C.SANJEEVIRAJA,  
EMERITUS PROFESSOR, DEPT. OF ECE,  
ALAGAPPA CHETTIAR GOVT. COLLEGE  
OF ENGINEERING & TECHNOLOGY,  
KARAIKUDI**

**on**

## **“X Ray Powder Diffraction”**

*Date: 14.08.2019*

*Time: 11 am*

*Venue: Smart Room*



**Prof. C. Sanjeeviraja, interacting with the audience during his lecture on X-ray powder diffraction**

### **List of Student Participants**

<b>S.No</b>	<b>Reg.No</b>	<b>Name</b>
1	2017P01	AGNES PRISTY I
2	2017P02	AKSHAYAA G
3	2017P03	AMALU SATHEESH
4	2017P04	ANEE JOSEPHA D
5	2017P05	ANNIE ROSELIN K
6	2017P06	ASSUMPTANA SIRUMALAR A
7	2017P07	BOWLINA A
8	2017P08	CELSI CLARIS J
9	2017P09	DARATHY CELCIYA A
10	2017P10	DEEPITHAKUMARI S
11	2017P11	DEVIGURUMATHI J
12	2017P12	DILYS SIDONY D
13	2017P13	FATHIMA VINNARASI A
14	2017P14	FEMI C
15	2017P15	FRANCIS GRACY A
16	2017P16	GNANAMALAR A
17	2017P17	HARINI T
18	2017P18	HARINI PRIYA S
19	2017P19	INDU PRIYADARSHINI S
20	2017P20	JASI AKAL SUGAPRIYA S
21	2017P21	JEEVIMELONIYA N
22	2017P22	JEEVITHA S
23	2017P23	JOHXY C

24	2017P24	KANISIYA R
25	2017P25	KARUNYA L
26	2017P26	KOWSALYA C M
27	2017P27	MADHUGOWRI S
28	2017P28	NANCY SUPRINA N
29	2017P29	PAVITHRA E
30	2017P30	PAVITHRA DEVI T
31	2017P31	POOJA L
32	2017P32	PRATHIKSHA S
33	2017P33	PREETHA E
34	2017P34	PRISILLA J
35	2017P35	ROSELIN VINNARASI P
36	2017P36	ROSHINI J
37	2017P37	RUBY REBECKA A
38	2017P38	SANGEETHA J P
39	2017P39	SARANYA K
40	2017P40	SHRINIDHY M
41	2017P41	SONALEE S M
42	2017P42	SOUNDARIYA A
43	2017P43	SURIYA PRABHA M
44	2017P44	THARANI RS
45	2017P45	YOGA MEENA R
46	2017P46	YUVADHARANI D
47	2018P01	Bhavani Sri Bharathi S
48	2018P02	Carol Francy Jenova J
49	2018P03	Dhiliba A
50	2018P04	Dhivya M
51	2018P05	Femi Maria Pauline J
52	2018P06	Janu S
53	2018P07	Jasmine Rosy A
54	2018P08	Jeyapriya M A
55	2018P09	Kalpanadevi P
56	2018P10	Kowsalya Bharathi B
57	2018P11	Manobala G
58	2018P12	Meenakshi R
59	2018P13	Megaraj Begam M
60	2018P14	Nila A
61	2018P15	Nivetha Priyadharshini M
62	2018P16	Nivetha S
63	2018P17	Sahaya Deebika P
64	2018P18	Selviswetha R
65	2018P19	Sivaranjani B
66	2018P20	Sri Varshini S
67	2018P21	Supaldi Sebastina P
68	2018P22	Swathi Boseni K

69	2018P23	Virgin Pragaspathi J
70	2018P24	Nikshala A
71	2018P25	ASHIKA V
72	2019P01	DEEPIKA R
73	2019P04	DIASSHARMATHI D
74	2019P05	FELCY JOSE ROY J
75	2019P06	HARISHMA B
76	2019P07	JAMES LINIA P
77	2019P08	JENIFER K
78	2019P09	JERLINFATIRANJITHAM E
79	2019P10	JOSIBA AROCKIA
80	2019P11	KEERTHIGA V
81	2019P12	LOGANAYAH I V M
82	2019P13	MERLIN PREETHI P
83	2019P14	MOHANAAMUTHUSELVI P
84	2019P15	MONICA A
85	2019P16	PREMIGA P
86	2019P17	SHANMUGHA SOUNDARE
87	2019P18	SHEEBAJESIN MERCYS
88	2019P19	SHEELAJENIFER A
89	2019P20	SHOBIKA B
90	2019P21	SOWMYA P
91	2019P22	SWEATHA N
92	2019P23	VINOTHA V
93	2019P24	JENOVA P
94	2019P25	IRUDAYA NICHOMI S
95	2019P26	YOGADHARSHINI B