



## **Indian Institute of Astrophysics**

(An Autonomous Body under Department of Science and  
Technology, Govt. of India)

2nd Block Koramangala, Bangalore - 560034

### **Certificate**

This is to certify the project entitled, "*Detecting planets around stars beyond our solar system: A case study with HD86081*", is an authentic and original work done by Ms. I. Agnes Pristy under my supervision online at Indian Institute of Astrophysics as part of her MSc. project.

Date: 22 June 2021

Place: Bangalore

Prof. T. Sivarani  
Indian Institute of Astrophysics  
Bangalore-34



Certificate No : KFT- 06-2021-056

## CERTIFICATE OF APPRECIATION

THIS IS TO CERTIFY THAT

**K. Annie Roselin**

of College Fatima college, Madurai-18.  
has successfully completed **15 days** internship on **"Practical Simulation to IoT"** held during **15th June 2021** to **30th June 2021**  
organized by **Kaizen Futuretech, Mumbai.**



**KAIZEN FUTURETECH**  
Workshop Organizer

**Er. Jaya Jotwani**  
Co-Founder

**Er. Manoj Kavedia**  
Resource Person & Founder



# MATERIALS RESEARCH CENTER

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| Email : [mrckovai@gmail.com](mailto:mrckovai@gmail.com)

**Dr. S. Selvasekarapandian**  
Director

Date : 07.08.2021

## CERTIFICATE

This is to certify that **Ms Anusuya J, II M.Sc. Physics [2020MSCP03]** Student from **Research Centre of Physics, Fatima College** has successfully completed her internship, under the mentorship of **Prof. Dr. S. Selvasekarapandian**, Emeritus Professor, Bharathiar University, & Director Materials Research Center, Coimbatore. She worked in Materials Research Center, **MADURAI BRANCH** on the title “**Theoretical and Experimental Study based on the Applications of Battery**” from 30.06.2021 to 30.07.2021.

*S. Selvasekarapandian*  
**S. Selvasekarapandian**  
Director





**CENTRE FOR NANOSCIENCE AND TECHNOLOGY  
ANNA UNIVERSITY, CHENNAI-600 025, INDIA**

**Mr. R. SELVARAJAN**  
Teaching Fellow

Tel : +91-44-2235 9205

+91-44-2230 9113

E-mail: rrselvarajan@gmail.com



Date : 18.11.2021

**BONAFIDE CERTIFICATE**

This is to certify that **Ms. ASSUMPTANA SIRUMALAR. A - 2020MSCP05**, II-MSc Physics student from **Research Centre of Physics, Fatima college (Autonomous), Affiliated to Madurai Kamaraj University, Madurai, Tamilnadu** has successfully completed her Internship on **"SYNTHESIS AND STRUCTURAL CHARACTERIZATION OF COPPER OXIDE (CuO) BY CHEMICAL PRECIPITATION METHOD"** at Centre for Nanoscience and Technology, Anna University, Chennai-600025 during the period from 1.7.2021 to 15.7.2021 through Online mode.

During the internship, we have found her to be dedicated, hardworking individual and her performance was good. She has scored an external mark of 59.

On behalf of our organization, we wish her all the best in her future endeavours and we wish her every success in life.



  
**R.SELVARAJAN**  
Teaching Fellow,  
Centre for Nanoscience and Technology,

A.C.Tech Campus,  
Anna University, Chennai-600 025.



**CENTRE FOR NANOSCIENCE AND TECHNOLOGY  
ANNA UNIVERSITY, CHENNAI-600 025, INDIA**

**Mr. R. SELVARAJAN**  
Teaching Fellow

Tel : +91-44-2235 9205

+91-44-2230 9113

E-mail: rrselvarajan@gmail.com



Date : 18.11.2021

**BONAFIDE CERTIFICATE**

This is to certify that **Ms. POOJA. L - 2020MSCP17**, II-MSc Physics student from Research Centre of Physics, Fatima college (Autonomous), Affiliated to Madurai Kamaraj University, Madurai, Tamilnadu has successfully completed her **Internship on "SYNTHESIS AND STRUCTURAL CHARACTERIZATION OF COPPER OXIDE (CuO) BY CHEMICAL PRECIPITATION METHOD"** at Centre for Nanoscience and Technology, Anna University, Chennai-600025 during the period from **1.7.2021** to **15.7.2021** through Online mode.

During the internship, we have found her to be dedicated, hardworking individual and her performance was good. She has scored an external mark of 59.

On behalf of our organization, we wish her all the best in her future endeavours and we wish her every success in life.



*R. Selvarajan*

**R.SELVARAJAN**

Teaching Fellow

Centre for Nanoscience and Technology.

A.C.Tech Campus,

Anna University, Chennai-600 025.





Certificate No : KFT- 06-2021-031

## CERTIFICATE OF APPRECIATION

THIS IS TO CERTIFY THAT

**SUBHAKARTHIKA. M. R**

of College Fatima college, Madurai  
has successfully completed **15 days** internship on **"Practical  
Simulation to IoT"** held during **15th June 2021** to **30th June 2021**  
organized by **Kaizen Futuretech, Mumbai.**



**KAIZEN FUTURETECH**  
Workshop Organizer

**Er. Jaya Jotwani**  
Co-Founder

**Er. Manoj Kavedia**  
Resource Person & Founder



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**Dr. S. Selvasekarapandian**  
Director

Date : 07.08.2021

## CERTIFICATE

This is to certify that Ms Darathy Celciya A, II M.Sc. Physics [2020MSCP06] Student from Research Centre of Physics, Fatima College has successfully completed her internship, under the mentorship of Prof. Dr. S. Selvasekarapandian, Emeritus Professor, Bharathiar University, & Director Materials Research Center, Coimbatore. She worked in Materials Research Center, MADURAI BRANCH on the title "Theoretical and Experimental Study based on the Applications of Battery" from 30.06.2021 to 30.07.2021.

*S. Selvasekarapandian*  
S. Selvasekarapandian  
Director

Madurai Branch: 7-A, Veerapathraiyer Lane, South Veli Street, MADURAI- 625001.

200 A, Thiruvalluvar Nagar, Ramanathapuram. Coimbatore - 641 045, INDIA.



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Email : [mrckovai@gmail.com](mailto:mrckovai@gmail.com)

**Dr. S. Selvasekarapandian**  
Director

Date : 07.08.2021

## CERTIFICATE

This is to certify that Ms Deepithakumari S, II M.Sc. Physics [2020MSCP07] Student from Research Centre of Physics, Fatima College has successfully completed her internship, under the mentorship of Prof. Dr. S. Selvasekarapandian, Emeritus Professor, Bharathiar University, & Director Materials Research Center, Coimbatore. She worked in Materials Research Center, MADURAI BRANCH on the title "Theoretical and Experimental Study based on the Applications of Battery" from 30.06.2021 to 30.07.2021.

*S. Selvasekarapandian*  
S. Selvasekarapandian  
Director

Madurai Branch: 7-A, Veerapathraiyer Lane, South Veli Street, MADURAI- 625001.

200 A, Thiruvalluvar Nagar, Ramanathapuram. Coimbatore - 641 045, INDIA.





## **Indian Institute of Astrophysics**

(An Autonomous Body under Department of Science and  
Technology, Govt. of India)

2nd Block Koramangala, Bangalore - 560034

### **Certificate**

This is to certify the project entitled, *“Detecting planets around stars beyond our solar system: A case study with HD86081”*, is an authentic and original work done by Ms. Dhevadarshini Thirumal under my supervision online at Indian Institute of Astrophysics as part of her MSc. project. Based on her performance during the project, online interaction and ability to independently learn the tools needed for this project, I am assigning 59 marks out of 60 for the project work.

Date: 22 June 2021

Place: Bangalore

Prof. T. Sivarani  
Indian Institute of Astrophysics  
Bangalore-34



**CENTRE FOR NANOSCIENCE AND TECHNOLOGY  
ANNA UNIVERSITY, CHENNAI-600 025, INDIA**

**Mr. R. SELVARAJAN**  
Teaching Fellow

Tel : +91-44-2235 9205

+91-44-2230 9113

E-mail: rrselvarajan@gmail.com



Date : 18.11.2021

**BONAFIDE CERTIFICATE**

This is to certify that **Ms. FEMI. C – 2020MSCP09**, II-MSc Physics student from Research Centre of Physics, Fatima college (Autonomous), Affiliated to Madurai Kamaraj University, Madurai, Tamilnadu has successfully completed her **Internship on “SYNTHESIS AND STRUCTURAL CHARACTERIZATION OF MANGANESE DIOXIDE ( $MnO_2$ ) BY CHEMICAL PRECIPITATION METHOD”** at Centre for Nanoscience and Technology, Anna University, Chennai-600025 during the period from **1.7.2021 to 15.7.2021** through Online mode.

During the internship, we have found her to be dedicated, hardworking individual and her performance was good. She has scored an external mark of 59.

On behalf of our organization, we wish her all the best in her future endeavours and we wish her every success in life.



  
**R.SELVARAJAN**  
Teaching Fellow  
Centre for Nanoscience and Technology.  
A.C.Tech Campus,  
Anna University, Chennai-600 025.







Certificate No : KFT- 06-2021-075

## CERTIFICATE OF APPRECIATION

THIS IS TO CERTIFY THAT

**GOPIKAVARSHINI.S**

of College **FATIMA COLLEGE**  
has successfully completed **15 days** internship on **"Practical Simulation to IoT"** held during **15th June 2021** to **30th June 2021** organized by **Kaizen Futuretech, Mumbai.**



**KAIZEN FUTURETECH**  
Workshop Organizer

**Er. Jaya Jotwani**  
Co-Founder

**Er. Manoj Kavedia**  
Resource Person & Founder



## Indian Institute of Astrophysics

(An Autonomous Body under Department of Science and  
Technology, Govt. of India)

2nd Block Koramangala, Bangalore - 560034

### Certificate

This is to certify the project entitled, *"Detecting planets around stars beyond our solar system: A case study with HD86081"*, is an authentic and original work done by Ms. P.Gowsika under my supervision online at Indian Institute of Astrophysics as part of her MSc. project. Based on her performance during the project, online interaction and ability to independently learn the tools needed for this project, I am assigning 59 marks out of 60 for the project work.

Date: 22 June 2021

Place: Bangalore

Sivarani

Prof. T.

Indian Institute of Astrophysics  
Bangalore-34



Certificate No : KFT- 06-2021-036



## CERTIFICATE OF APPRECIATION

THIS IS TO CERTIFY THAT

**INDU PRIYADARSHINI S**

of College Fatima college  
has successfully completed **15 days** internship on **"Practical Simulation to IoT"** held during **15th June 2021** to **30th June 2021**  
organized by **Kaizen Futuretech, Mumbai.**



**KAIZEN FUTURETECH**  
Workshop Organizer

**Er. Jaya Jotwani**  
Co-Founder

**Er. Manoj Kavedia**  
Resource Person & Founder

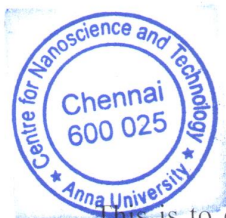


**CENTRE FOR NANOSCIENCE AND TECHNOLOGY  
ANNA UNIVERSITY, CHENNAI-600 025, INDIA**

**Mr. R. SELVARAJAN**  
Teaching Fellow

Tel : +91-44-2235 9205  
+91-44-2230 9113

E-mail: rrselvarajan@gmail.com



Date : 18.11.2021


**BONAFIDE CERTIFICATE**

This is to certify that **Ms.KARUNYA. L – 2020MSCP13**, II-MSc Physics student from **Research Centre of Physics, Fatima college (Autonomous), Affiliated to Madurai Kamaraj University, Madurai, Tamilnadu** has successfully completed her **Internship on “SYNTHESIS AND STRUCTURAL CHARACTERIZATION OF MANGANESE DIOXIDE (MnO<sub>2</sub>) BY CHEMICAL PRECIPITATION METHOD”** at **Centre for Nanoscience and Technology, Anna University, Chennai-600025** during the period from **1.7.2021 to 15.7.2021** through Online mode.

During the internship, we have found her to be dedicated, hardworking individual and her performance was good. She has scored an external mark of 59.

On behalf of our organization, we wish her all the best in her future endeavours and we wish her every success in life.



  
**R.SELVARAJAN**  
Teaching Fellow  
Centre for Nanoscience and Technology,  
A.C.Tech Campus,

Anna University, Chennai-600 025.





Certificate No : KFT- 06-2021-076



## CERTIFICATE OF APPRECIATION

THIS IS TO CERTIFY THAT

**M.MADHUMITHA**

of College **FATIMA COLLEGE**  
has successfully completed **15 days** internship on **"Practical Simulation to IoT"** held during **15th June 2021** to **30th June 2021** organized by **Kaizen Futuretech, Mumbai.**



**KAIZEN FUTURETECH**  
Workshop Organizer

**Er. Jaya Jotwani**  
Co-Founder

**Er. Manoj Kavedia**  
Resource Person & Founder

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Dr. S. Selvasekarapandian  
Director

Date : 07.08.2021

## CERTIFICATE

This is to certify that Ms Marshalin Reena C, II M.Sc. Physics [2020MSCP15] Student from Research Centre of Physics, Fatima College has successfully completed her internship, under the mentorship of Prof. Dr. S. Selvasekarapandian, Emeritus Professor, Bharathiar University, & Director Materials Research Center, Coimbatore. She worked in Materials Research Center, MADURAI BRANCH on the title "Theoretical and Experimental Study based on the Applications of Battery" from 30.06.2021 to 30.07.2021.

  
S. Selvasekarapandian  
Director

Madurai Branch: 7-A, Veerapathraiyer Lane, South Veli Street, MADURAI- 625001.

200 A, Thiruvalluvar Nagar, Ramanathapuram. Coimbatore - 641 045, INDIA.



Certificate No : KFT- 06-2021-021



## CERTIFICATE OF APPRECIATION

THIS IS TO CERTIFY THAT

**E.MUTHULAKSHMI**

of College Fatima College  
has successfully completed **15 days** internship on **"Practical Simulation to IoT"** held during **15th June 2021** to **30th June 2021**  
organized by **Kaizen Futuretech, Mumbai.**



**KAIZEN FUTURETECH**  
Workshop Organizer

**Er. Jaya Jotwani**  
Co-Founder

**Er. Manoj Kavedia**  
Resource Person & Founder



**CENTRE FOR NANOSCIENCE AND TECHNOLOGY  
ANNA UNIVERSITY, CHENNAI-600 025, INDIA**

**Mr. R. SELVARAJAN**  
Teaching Fellow

Tel : +91-44-2235 9205

+91-44-2230 9113

E-mail: rrselvarajan@gmail.com



Date : 18.11.2021

**BONAFIDE CERTIFICATE**

This is to certify that **Ms. POOJA. L - 2020MSCP17**, II-MSc Physics student from Research Centre of Physics, Fatima college (Autonomous), Affiliated to Madurai Kamaraj University, Madurai, Tamilnadu has successfully completed her **Internship on "SYNTHESIS AND STRUCTURAL CHARACTERIZATION OF COPPER OXIDE (CuO) BY CHEMICAL PRECIPITATION METHOD"** at Centre for Nanoscience and Technology, Anna University, Chennai-600025 during the period from **1.7.2021** to **15.7.2021** through Online mode.

During the internship, we have found her to be dedicated, hardworking individual and her performance was good. She has scored an external mark of 59.

On behalf of our organization, we wish her all the best in her future endeavours and we wish her every success in life.



**R.SELVARAJAN**

Teaching Fellow

Centre for Nanoscience and Technology.

A.C.Tech Campus,

Anna University, Chennai-600 025.





Certificate No : KFT- 06-2021-047



## CERTIFICATE OF APPRECIATION

THIS IS TO CERTIFY THAT

***C. Richa Dharani***

of College **Fatima College**  
has successfully completed 15 days internship on **"Practical Simulation to IoT"** held during **15th June 2021** to **30th June 2021**  
organized by **Kaizen Futuretech, Mumbai.**



**KAIZEN FUTURETECH**  
Workshop Organizer

**Er. Jaya Jotwani**  
Co-Founder

**Er. Manoj Kavedia**  
Resource Person & Founder

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**Dr. S. Selvasekarapandian**  
Director

Date : 07.08.2021

## CERTIFICATE

This is to certify that Ms Roshini J, II M.Sc. Physics [2020MSCP19] Student from Research Centre of Physics, Fatima College has successfully completed her internship, under the mentorship of Prof. Dr. S. Selvasekarapandian, Emeritus Professor, Bharathiar University, & Director Materials Research Center, Coimbatore. She worked in Materials Research Center, MADURAI BRANCH on the title "Theoretical and Experimental Study based on the Applications of Battery" from 30.06.2021 to 30.07.2021.

*S. Selvasekarapandian*  
S. Selvasekarapandian  
Director

Madurai Branch: 7-A, Veerapathraiyer Lane, South Veli Street, MADURAI- 625001.

200 A, Thiruvalluvar Nagar, Ramanathapuram. Coimbatore - 641 045, INDIA.





**Indian Institute of Astrophysics**  
(An Autonomous Body under Department of Science and  
Technology, Govt. of India)

2nd Block Koramangala, Bangalore - 560034

**Certificate**

This is to certify the project entitled, "*Detecting planets around stars beyond our solar system: A case study with HD86081*", is an authentic and original work done by Ms. S. Selvasuba under my supervision online at Indian Institute of Astrophysics as part of her MSc. project.

Date: 22 June 2021  
Place: Bangalore

Prof. T. Sivarani  
Indian Institute of Astrophysics  
Bangalore-34

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Email : [mrckovai@gmail.com](mailto:mrckovai@gmail.com)

**Dr. S. Selvasekarapandian**  
Director

Date : 07.08.2021

## CERTIFICATE

This is to certify that Ms Shrinidhy M, II M.Sc. Physics [2020MSCP22] Student from Research Centre of Physics, Fatima College has successfully completed her internship, under the mentorship of Prof. Dr. S. Selvasekarapandian, Emeritus Professor, Bharathiar University, & Director Materials Research Center, Coimbatore. She worked in Materials Research Center, MADURAI BRANCH on the title "Theoretical and Experimental Study based on the Applications of Battery" from 30.06.2021 to 30.07.2021.

*S. Selvasekarapandian*  
**S. Selvasekarapandian**  
Director

Madurai Branch: 7-A, Veerapathraiyer Lane, South Veli Street, MADURAI- 625001.

200 A, Thiruvalluvar Nagar, Ramanathapuram. Coimbatore - 641 045, INDIA.





Certificate No : KFT- 06-2021-031

## CERTIFICATE OF APPRECIATION

THIS IS TO CERTIFY THAT

**SUBHAKARTHIKA. M. R**

of College Fatima college, Madurai  
has successfully completed **15 days** internship on **"Practical  
Simulation to IoT"** held during **15th June 2021** to **30th June 2021**  
organized by **Kaizen Futuretech, Mumbai.**



**KAIZEN FUTURETECH**  
Workshop Organizer

**Er. Jaya Jotwani**  
Co-Founder

**Er. Manoj Kavedia**  
Resource Person & Founder

Certificate No : KFT- 06-2021-030



## CERTIFICATE OF APPRECIATION

THIS IS TO CERTIFY THAT

**Ms.P.Suryakala**

of College The Fatima College Madurai

has successfully completed **15 days** internship on **"Practical Simulation to IoT"** held during **15th June 2021** to **30th June 2021** organized by **Kaizen Futuretech, Mumbai.**



**KAIZEN FUTURETECH**  
Workshop Organizer

**Er. Jaya Jotwani**  
Co-Founder

**Er. Manoj Kavedia**  
Resource Person & Founder



Certificate No : KFT- 06-2021-057

## CERTIFICATE OF APPRECIATION

THIS IS TO CERTIFY THAT

**Maria suji M**

of College Fathima college madurai  
has successfully completed **15 days** internship on **"Practical Simulation to IoT"** held during **15th June 2021** to **30th June 2021**  
organized by **Kaizen Futuretech, Mumbai.**



**KAIZEN FUTURETECH**  
Workshop Organizer

**Er. Jaya Jotwani**  
Co-Founder

**Er. Manoj Kavedia**  
Resource Person & Founder



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Email : [mrckovai@gmail.com](mailto:mrckovai@gmail.com)

**Dr. S. Selvasekarapandian**  
Director

Date : 07.08.2021

## CERTIFICATE

This is to certify that Ms Sonalee S M, II M.Sc. Physics [2020MSCP27] Student from Research Centre of Physics, Fatima College has successfully completed her internship, under the mentorship of Prof. Dr. S. Selvasekarapandian, Emeritus Professor, Bharathiar University, & Director Materials Research Center, Coimbatore. She worked in Materials Research Center, MADURAI BRANCH on the title "Theoretical and Experimental Study based on the Applications of Battery" from 30.06.2021 to 30.07.2021.

*S. Selvasekarapandian*  
S. Selvasekarapandian  
Director

Madurai Branch: 7-A, Veerapathraiyer Lane, South Veli Street, MADURAI- 625001.

200 A, Thiruvalluvar Nagar, Ramanathapuram. Coimbatore - 641 045, INDIA.