



Human Resource Management Unit

CSIR-National Chemical Laboratory, Dr Homi Bhabha Road, Pashan, Pune 411008

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25th April, 2018

Visit of Students from Savitribai Phule Pune University, Pune on 25th April, 2018

Prof. Kiran Deshpande along with 14 M. Tech (Energy) students from Savitribai Phule Pune University (SPPU) visited the Fuel Cell lab (PAM Building) on 25th April, 2018, to see and understand how a polymer electrolyte membrane fuel cell (PEMFC) works. Dr. K. Sreekumar and his PhD students explained the working principle and applications of PEMFC with the help of components and working models. A detailed explanation on how each component is made, what are their significances etc. were given to the students. Working principles of different electrochemical equipment which are being used for analysing and characterising various systems and materials were also detailed to the students. Dr. Sreekumar and his team also explained other facilities which are mainly meant for fabrication and assembling of the PEMFC electrodes, membrane electrode assemblies and stacks. Dr Sreekumar briefed the students on the components of the PEMFCs, their arrangement in the system and the physical operation of the system. Mr. Rajith and Mr. Siddheshwar, PhD students explained how testing of a fuel cell stack can be carried out. Mr. Rajith explained the principle and applications of cyclic voltammetry and its importance in the catalyst development and characterization.

Later on, the team was directed to the Polymer Processing Centre (PPC) lab to see the testing of stack sized PEMFCs. The team was detailed on how single cell and stack testing can be done on the fuel cell test stations and how the control parameters are set to achieve the required performance characteristics.

The students were largely benefited and felt the visit enhanced their knowledge. They were impressed with the facilities and the knowledge they gained during the short visit. Even though currently they are learning about the working principles of fuel cells as part of their academic curriculum, the students were really excited to see the real physical system and how it is working during the testing time. The program was coordinated by Dr. K. Sreekumar along with his PhD students.



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Feedback Form

Name of Student / Faculty filling the form in capital letters: Kiran Deshpande

1.	Today's Date	25/04/2018		
2.	Name of School / College in <u>capital letters</u> with District / State	Savitribai Phule Pune University Pune		
3.	Standard / Class in which studying	M.Tech - 1 st Year		
4.	Total Number of Students Visiting and Teachers / Principals accompanied	No of Girls	No of Boys	No of Teachers / Principals
		2	12	1
5.	Name of department (if studying in college)	Energy		
6.	Expectations from the visit	Fuel Cell		
7.	Was the visit helpful, kindly tick (✓) from 1 to 5 (1-okay 2 – Good, 3-Very good- 4- Excellent)	1	2	3
				✓
8.	What did you learn / understand during the visit	Fuel Cell Working		
9.	Which talk / facility did you like the most	All esp Rajit Sir & Dr Shreekumar		
10.	Any Suggestions / Compliments	Thanks, very well organised We look forward to joint projects		



Feedback Form

Name of Student / Faculty filling the form in capital letters: SATHE GANESH DEEPAK

1.	Today's Date	25/4/2018		
2.	Name of School / College in capital letters with District / State	SCHOOL OF ENERGY STUDIES SPPU, PUNE		
3.	Standard / Class in which studying	M. Tech (I)		
4.	Total Number of Students Visiting and Teachers / Principals accompanied	No of Girls	No of Boys	No of Teachers / Principals
		2	12	1
5.	Name of department (if studying in college)	ENERGY.		
6.	Expectations from the visit	Design & Testing of Fuel cell.		
7.	Was the visit helpful, kindly tick (✓) from 1 to 5 (1-okay 2 - Good, 3-Very good- 4- Excellent)	1	2	3
				✓
8.	What did you learn / understand during the visit	Seen Actual comp. & testing of F.C.		
9.	Which talk / facility did you like the most	Dr.K.Srikumar.		
10.	Any Suggestions / Compliments	Can provide study or Internship for Energy students for as curriculum		

Thank you for visiting CSIR-NCL.



Feedback Form

Name of Student / Faculty filling the form in capital letters: BATULE MARSHAD MANOHAR

1.	Today's Date	25 April 2018		
2.	Name of School / College in <u>capital letters</u> with District / State	SCHOOL OF ENERGY STUDIES, SPPU, PUNE		
3.	Standard / Class in which studying	M.Tech - 1 ST year		
4.	Total Number of Students Visiting and Teachers / Principals accompanied	No of Girls	No of Boys	No of Teachers / Principals
		2	12	1
5.	Name of department (if studying in college)	Energy Studies		
6.	Expectations from the visit	To know details about PEM fuel cell.		
7.	Was the visit helpful, kindly tick (✓) from 1 to 5 (1-okay 2 - Good, 3-Very good- 4- Excellent)	1	2	3
				✓
8.	What did you learn / understand during the visit	In much depth about PEM cell and much R&D by NCL Lab.		
9.	Which talk / facility did you like the most	Dr. Sree Kumar sir - Introduction to fuel cell Rajit → Laboratory explore of PEM		
10.	Any Suggestions / Compliments	More visits our projects it we want to study in particular areas		

Thank you for visiting CSIR-NCL.



Feedback Form

Name of Student / Faculty filling the form in capital letters: PURVA . A SHINDE

1.	Today's Date	25 th April 2018		
2.	Name of School / College in <u>capital letters</u> with District / State	SCHOOL OF ENERGY STUDIES, SPPU, PUNE		
3.	Standard / Class in which studying	MTech -1		
4.	Total Number of Students Visiting and Teachers / Principals accompanied	No of Girls	No of Boys	No of Teachers / Principals
		2	12	1
5.	Name of department (if studying in college)			
6.	Expectations from the visit	To understand the construction & working of fuel cell & the innovations in that field		
7.	Was the visit helpful, kindly tick (✓) from 1 to 5 (1-okay 2 - Good, 3-Very good- 4- Excellent)	1	2	3
				✓
8.	What did you learn / understand during the visit	Fuel cell in running condition, Various stacks in it, RF Dinit		
9.	Which talk / facility did you like the most	Mr. Dr. Sreekumar , Rajit		
10.	Any Suggestions / Compliments	Very enthusiastic staff of the Students in the lab have detailed knowledge about the field.		

Thank you for visiting CSIR-NCL.