



ANJALI CHOUBEY

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PERSONAL PROFILE

I am a dynamic and driven, fresh Sustainable energy graduate with expertise in Photovoltaic technology and a background in Chemical engineering. I have a deep understanding of working, fabrication and characterization of solar cells. Additionally, I have expertise in installation of solar technology and possess exceptional technical, analytical and problem-solving skills. I am currently looking for an exciting opportunity to kickstart my career and enjoy the next challenge in life.

SOFT SKILLS

- Innovative
- Enthusiastic
- Organized
- Result oriented
- Keen observer
- Critical thinker
- Effective communicator
- Excellent persuader
- Dynamic leader
- Team player
- Quick learner
- Multitasker
- Resilient
- Flexible

COMPUTER SKILLS

- MS Office
- MATLAB
- PVSYS & PVSOL
- AutoCAD (basic)
- ASPENPLUS (basic)
- Origin
- Latex

EDUCATION

Master of Science in SUSTAINABLE ENERGY TECHNOLOGY

Sep 2016 - Feb 2019

Delft University of Technology, Delft, The Netherlands

GPA: 7.2/10

Specialized in Photovoltaic technology (Solar energy)

Bachelor of Technology in CHEMICAL ENGINEERING

Aug 2011- May 2015

SRM University, Chennai, India

CGPA: 8.9/10

First class with distinction

PROJECTS AND INTERNSHIPS

Master thesis project, TU Delft, The Netherlands

Mar 2018 - Feb 2019

Topic: Optimization of plasmonic white paint back reflector for silicon solar cells.

- Performed extensive experiments and simulations to optimize the morphology of plasmonic nanoparticles and thickness of white paint layer for back reflector application in flat poly-SiO_x passivating c-Si wafers.
- Fabricated and characterized, solar cells with optimized back reflectors. Achieved short-circuit current density gain of 0.8 mA/cm² when compared to conventional flat metal back reflectors.

Team project (Thin Film), TU Delft, The Netherlands

Feb 2018 - Apr 2018

Topic: Transparent self-cleaning coatings for solar modules.

- Carried out a detailed comparative study to find a material with refractive index value close to glass and super-hydrophobic properties, for the development of transparent self-cleaning coating for solar modules.
- Compared the strengths and limitations of different thin-film materials and their deposition techniques. Results indicated a layer of spin coated alumina as the best option in terms of material properties, layer morphology, easy handling and cost-effectiveness.

System integrated project, TU Delft, The Netherlands

Oct 2017 - Feb 2018

Topic: Analyzing optical properties of multi-layer plasmonic back reflectors.

- Carried out an extensive experimental study to determine the exact number of layers of plasmonic nanoparticles needed to enhance light absorption in solar cells in the infra-red spectrum of light.
- Detailed optical characterization revealed single layer to be the best option because multiple layers resulted in drastic increase in parasitic absorption, which is detrimental for solar cells.

Team project (PV Systems), TU Delft, The Netherlands

Feb 2017 - Apr 2017

Topic: Rooftop PV installation in India.

- Performed extensive location survey and designed a grid connected PV rooftop system based on the load demand of a household in India using MATLAB.
- Detailed feasibility study and economic analysis revealed enormous rooftop PV potential in India. When coupled with subsidies the payback period was only 8 years.

Team project (Strategic Niche Management), TU Delft, The Netherlands

Nov 2016 - Jan 2017

Topic: Potential of Solar technology in Tamil Nadu.

- Carried out detailed feasibility study by applying functions of innovation system strategies to determine the barriers and drivers of solar technology growth in Tamil Nadu, India.
- Discovered that the technology was still in its niche state and had a massive potential for growth. Hence, suggested recommendations for concrete growth of the technology.

LANGUAGE SKILLS

- English
- Hindi
- Dutch (A2 level)
- Tamil (basic)

INTERESTS AND HOBBIES

- Photovoltaic technology
- Semiconductor physics
- Thin-film technology
- Optics
- Chemical engineering
- Photovoltaic systems
- Smart grid
- Energy storage
- Mathematics
- Human psychology
- Cooking
- Dancing
- Singing
- Socializing

EQUIPMENT HANDELED

- Physical vapor deposition unit
- RF-Magnetron sputtering unit
- Scanning-electron microscopy
- Spectrophotometer
- Photoconductance lifetime tester
- EQE setup
- Illuminated J-V setup

LIST OF REFERENCES

- **Name:** Dr. Olindo Isabella
Position: Associate professor,
Dept. of Electrical Sustainable
Energy, Faculty of EEMCS,
TU Delft, The Netherlands
E-mail: o.isabella@tudelft.nl
Telephone: +31152781947

- **Name:** Dr. Rudi Santbergen
Position: Post-doc researcher,
Dept. of Electrical Sustainable
Energy, Faculty of EEMCS,
TU Delft, The Netherlands
E-mail: r.santbergen@tudelft.nl
Telephone: +31152784425

Bachelor thesis project, SRM University, India

Aug 2014 - May 2015

Topic: Design a process plant to produce 1000 L of Sulfamic acid per day.

- Carried out extensive mass and energy balance calculations with the help of MATLAB to produce 1000 L of Sulfamic acid per day. Designed various process equipment needed for the plant using ASPEN PLUS simulation tool
- Conducted feasibility study and economic analysis to assess the profitability of the designed process plant. Also suggested various industrial applications of the chemical.

Team project (Laboratory), SRM university, India

Aug 2014 - Nov 2014

Topic: Chemical reaction engineering and process control laboratory.

- Calculated the rate parameters of various chemical reactions based on their reaction kinetic data. Studied design equations and working principle of various flow reactors.
- Examined various controllers and types of system response used in power plants and understood their functional characteristics.

Summer Intern at Navin Fluorine International Limited, Surat, India

June 2012 - Jul 2012

- Gained knowledge on manufacturing, handling and transportation of various hazardous industrial grade chemicals.
- Designed a waste heat recovery system to effectively capture and utilize the excess heat generated when synthesizing H_2SO_4 .

EXTRA-CURRICULARS

Part-time job at McDonald's, The Hague, The Netherlands

Aug 2019 - Sep 2019

Diligently handled various workstations like customer counter, kitchen and lobby along with fellow crew members.

Workshop at YESDelft, Delft, The Netherlands

5th July 2019

Attended a daylong techno-entrepreneurial workshop with a group of people from diverse backgrounds. Brainstormed a start-up idea and discussed marketing strategies for an IoT device with the group.

Volunteer at European PV Solar Energy Conference, Brussels, Belgium

24th-28th Sep 2018

Attended and volunteered at the 35th European solar energy conference. Assisted the organizing committee with day-to-day activities and learned a great deal about organizing a world-class event. Also, got familiarized with the current trends in solar.

Workshop at Micro Energy International, Berlin, Germany

5th-10th Nov 2016

Energize the base of the pyramid: Learned various approaches and tools to design a sustainable business model. Learnt effective ways to install and distribute clean energy in third world countries for low-income households. Was awarded with a certificate of participation.

Student Mentor at SRM Social Club & Ullas Trust, Chennai, India

Jan 2015 - May 2015

Taught elementary science and mathematics to public school children from low-income households. Conducted quizzes and talent shows to realize their potential and awarded scholarships for higher education to deserving candidates.

Event Coordinator at Aarush, SRM University, Chennai, India

5th-7th Aug 2013

Organized an event (Survivor's quest) at a national level technical fest that attracted over 1000 participants. Focused primarily on publicizing and smooth running of the event. Excellent advertising strategies along with effective communication made the event a mega success.

Cadette at National Cadet Corps, SRM University, Chennai, India

Aug 2011 - May 2014

The National Cadet Corps (NCC) is the youth wing of the Armed forces of India. Enrolled in NCC as an extra-curricular alongside a full-time bachelor's program. Underwent basic military training, was also responsible for training junior cadets and organizing awareness camps along with other things. Developed leadership, team-playing and effective communication abilities along with self-confidence and resilience. For a dedicated service of three years, was awarded with a "C-certificated", which is the highest level of honor for an NCC cadet.