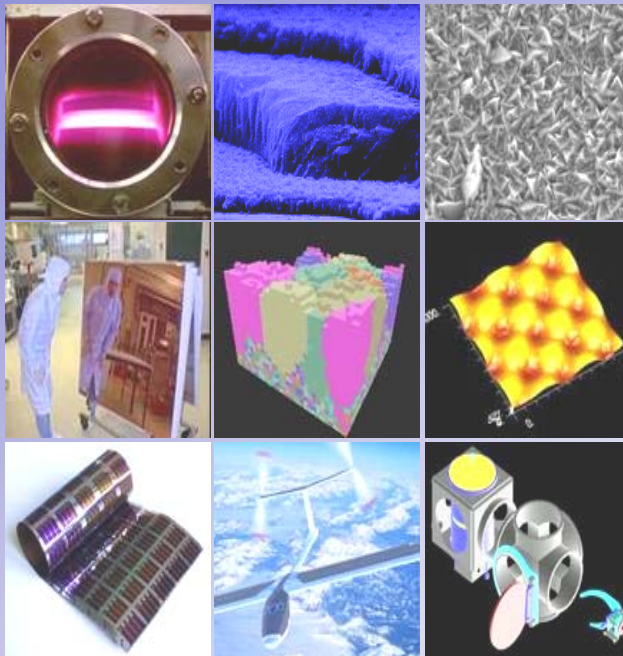


# PV-LAB SCHOOL

## 2-DAYS INTENSIVE TRAINING ON PHOTOVOLTAICS



Especially designed to provide participants with a high level understanding of photovoltaic devices, processes and market challenges

Next dates – 26-27 April

**Location** Institut de microtechnique IMT, EPFL  
Rue A.L. Breguet 2  
2000 Neuchâtel, Switzerland

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<http://pvlab.epfl.ch/>



## Highlights

- State of the art on PV and market situation
- Materials and semiconductors
- Different PV technologies
- Thin film deposition processes
- Encapsulation and testing
- PV installation at IMT
- Lab tour

## PV-LAB

- A leading laboratory in PV
- Many PV-LAB schools organised in the last years
- Pioneer in very high frequency deposition processes, micromorph technology, high performance TCO

## Details

<b>Early rate</b>	1000 € + VAT (7.6%) / participant*
<b>Standard rate</b>	1200 € + VAT (7.6%) / participant

Rates include the support training material (Paper version at the beginning of each lesson + CD at the end of the week), 1 welcome aperitif, coffee breaks, lunches for 2 days.

Accommodation is not included in the course price. Information on accommodation will be sent upon registration.

\* The lecture will take place with a minimum of 10 participants. A maximum of 18 participants per session is accepted

\* Early rate means registration at least 1 month before the beginning of the session.

## Detailed program

To be discussed  
See typical training program  
on next page



## PV-Lab school program

Timetable	8h <sup>00</sup> -8h <sup>45</sup>	9h <sup>00</sup> -9h <sup>45</sup>	10h <sup>00</sup> -10h <sup>45</sup>	11h <sup>00</sup> -12h <sup>00</sup>	Lunc h	13h <sup>30</sup> -14h <sup>15</sup>	14h <sup>30</sup> -15h <sup>15</sup>	15h <sup>30</sup> -16h <sup>15</sup>	16h <sup>30</sup> -17h <sup>15</sup>	
Monday	<b>General intro to PV School</b> <ul style="list-style-type: none"> <li>▪ Introduction to PV</li> <li>▪ Challenges of PV</li> <li>▪ Materials - Semiconductor properties</li> <li>▪ Different PV technologies</li> <li>▪ Market situation</li> </ul>			<b>Thin film deposition processes</b> <ul style="list-style-type: none"> <li>▪ PVD</li> <li>▪ CVD</li> <li>▪ PECVD</li> </ul>		<b>Crystalline Si photovoltaics</b> <ul style="list-style-type: none"> <li>▪ Principle</li> <li>▪ Typical efficiencies</li> <li>▪ Wafer processing</li> <li>▪ Module processing</li> <li>▪ Towards higher efficiency/lower costs</li> <li>▪ Leading manufacturers</li> <li>▪ Testing techniques</li> </ul>			<b>Lab tour</b> <ul style="list-style-type: none"> <li>▪ Deposition systems</li> <li>▪ Diagnosis tools</li> </ul>	Apero
Tuesday	<b>Thin film technologies</b> <ul style="list-style-type: none"> <li>▪ Major existing thin film technologies</li> <li>▪ Principle</li> <li>▪ Thin film silicon vs Crystalline technologies</li> <li>▪ Production steps</li> <li>▪ Leading manufacturers</li> <li>Testing techniques</li> </ul>					<b>Module, encapsulation and testing</b> <ul style="list-style-type: none"> <li>▪ Principle</li> <li>▪ Equipments</li> <li>▪ Materials</li> <li>▪ Standards and testing</li> <li>▪ Effects when measuring thin-film modules</li> </ul>			<b>PV installation</b> <ul style="list-style-type: none"> <li>▪ Stand-alone</li> <li>▪ Grid connection</li> <li>▪ Batteries</li> <li>▪ Converters</li> </ul>	

