

# Material characterisation

## Optical Microscope

Type of equipment	Name of equipment	Location	Contact person	Link to more information
Optical microscope	Wild Heerbrugg	A-443	<a href="#">Berit Vinje Kramer</a>	
Optical microscope	Leica MEF4M	E-514	<a href="#">Berit Vinje Kramer</a>	
Optical microscope	Reichert-Jung Univar	E-514	<a href="#">Berit Vinje Kramer</a>	
Optical microscope	Makroskop Leitz M400	E-508	<a href="#">Berit Vinje Kramer</a>	
Optical microscope	Leitz MM6	E-508	<a href="#">Berit Vinje Kramer</a>	
Optical microscope	Zeiss Axiovert 25	E-508	<a href="#">Berit Vinje Kramer</a>	<a href="#">Zeiss Axiovert 25</a>
Optical microscope	Leitz metalloplan	E-508	<a href="#">Berit Vinje Kramer</a>	
Optical microscope	Leitz 1A	E-508	<a href="#">Berit Vinje Kramer</a>	
Optical microscope	Reichert MEF1	E-508	<a href="#">Berit Vinje Kramer</a>	
Optical microscope	Leitz Metallux 3	E-514A	<a href="#">Berit Vinje Kramer</a>	<a href="#">Leitz Metallux 3</a>
Videokamera (2 stk)	JVC TK-S310 EG	KII-014	<a href="#">Trygve L. Schanche</a>	
Videokamera til mikroskop	Leica R3 electr.	E-514A	<a href="#">Berit Vinje Kramer</a>	
Optical microscope	Leitz Axioskop	E-514A	<a href="#">Berit Vinje Kramer</a>	<a href="#">Leitz Axioskop</a>
Optical Microscope	Nikon SM2800	KII-323	Eli Beate Larsen	
Optical Microscope	Leica DM IRM	KII-323	Johannes Ofstad	
Optical microscope	Zeiss	KII-003A	<a href="#">Agnes C Digranes</a>	
Optical microscope	Leica DMIL	KII-022	<a href="#">Andrey Kosinskiy</a>	
Optical microscope	Olympus BH-2	KII-032A	Stein Rørvik (SINTEF)	
Optical microscope	Reichert MeF3A med Sony kamera	KII-032A	Stein Rørvik (SINTEF)	
Optical microscope	Olympus BX60	KII-032A	Stein Rørvik (SINTEF)	
Optical microscope	Leica EZ4	KII-034B	<a href="#">Sergey Khromov</a>	
Optical microscope	Wild Heerbrugg	KII-011		
Optical microscope 3D	Alicona Infinite Focus	KII-032A	<a href="#">Andrey Kosinskiy</a>	

## Electron microscope



[More information on SEM - TEM](#)

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Type of equipment	Name of equipment	Location	Contact person	Link to more information
Scanning Electron Microscopy	FE-SEM with Bruker EDS/NORDIF EBSD system Hitachi SU6600	F-362	<a href="#">Yingda Yu</a>	
Scanning Electron Microscopy	FE-SEM with Bruker EDS/NORDIF EBSD system Zeiss Ultra 55	F-362	<a href="#">Yingda Yu</a>	
Scanning Electron Microscopy	SEM with Nordif EBSD system JEOL JSM 840A	F-362	<a href="#">Yingda Yu</a>	
Scanning Electron Microscopy	SEM with Gatan CL system JEOL JSM 840	F-369	<a href="#">Yingda Yu</a>	
Scanning Electron Microscopy	SEM with JEOL EDS system JEOL JSM 6010LA	F-369	<a href="#">Yingda Yu</a>	
Scanning Electron Microscopy	FE-SEM with EDAX EDS system Zeiss Supra 55VP	F-369	<a href="#">Yingda Yu</a>	

Scanning electron microscopy	Hitachi S-3400N	KII-036	<a href="#">Sergey Khromov</a>	
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## Scanning probe microscope

Type of equipment	Name of equipment	Location	Contact person	Link to more information
Electron Micro Probe Analyzer	FE-EPMA with JEOL WDS system JEOL JXA 8500	F-373	<a href="#">Morten Raanes</a>	
Scanning probe microscope	Agilent 5500 AFM/SPM microscope	KII-003A	<a href="#">Agnes C Digranes</a>	<a href="#">About the instrument</a>

## Transmission electron microscopy

 [More information on SEM - TEM](#)  
[EMLab](#)

Type of equipment	Name of equipment	Location	Contact person	Link to more information
TEM with Gatan GIF system	JEOL TEM 2010	F-368	<a href="#">Yingda Yu</a>	

## Thermal analysis

Type of equipment	Name of equipment	Location	Contact person	Link to more information
Thermal analysis	DTA/TGA Setaram Sensis	A-K032	Sarina Bao (SINTEF)	
Thermal analysis	Electrical conductivity furnace	KII-103	<a href="#">Pei Na Kui</a>	
Thermal analysis	NETZSCH dilatometer 402C, thermal analysis	KII-103	<a href="#">Pei Na Kui</a>	<a href="#">Dilatometer</a>
Thermal analysis	NETZSCH STA F3 449 Jupiter (Hugin)	KII-103	<a href="#">Pei Na Kui</a>	<a href="#">Simultaneous Thermal Analysis</a>
Thermal analysis	NETZSCH STA C 449 Jupiter, (Munin)	KII-103	<a href="#">Pei Na Kui</a>	<a href="#">Simultaneous Thermal Analysis combined with mass spectrometry</a>
Thermal analysis	LINSEIS STA PT 1600, (Linseis)	KII-103	<a href="#">Pei Na Kui</a>	<a href="#">Simultaneous Thermal Analysis</a>
Thermal analysis	NETZSCH dilatometer 402E	KII-103	Paul Inge Dahl (SINTEF)	
Thermal analysis	NETZSCH DSC 214 Polyma	KII-103	<a href="#">Pei Na Kui</a>	<a href="#">DSC 214 Polyma</a>
Thermal analysis	Optisk dilatometer-Expert system	KII-103	Anne Støre (SINTEF)	
Thermal analysis	LFA Microflash, termisk diffusivitet	KII-103	Anne Støre (SINTEF)	
Thermal analysis	Dilatometer	KII-303	Anne Støre (SINTEF)	

## Spectroscopy

Type of equipment	Name of equipment	Location	Contact person	Link to more information
Glow discharge optical emission spectroscopy (GD-OES)	Horiba GD profiler 2	KII-307	<a href="#">Sergey Khromov</a>	<a href="#">Glow discharge optical emission spectroscopy (GD-OES) Horiba GD Profiler 2</a>
Glow discharge mass spectrometry (GDMS)	Astrum GDMS (Nu Instruments, Ametek)	KII-307	<a href="#">Sergey Khromov</a>	<a href="#">Glow discharge mass spectrometry Astrum GDMS (Nu instruments, Ametek)</a>
Mass spectrometer + potensiostat	Differential Electrochemical Mass Spectrometry (DEMS) station	KII-323	<a href="#">Svein Sunde</a>	
UV-vis/NIR spectrophotometer + potensiostat	Photoelectrochemical station	KII-001	<a href="#">Svein Sunde</a>	
FTIR spectrometer	Bruker Vertex 80v	KII-323	<a href="#">Johannes Ofstad</a>	<a href="#">Bruker Vertex 80v</a>
Raman microscope	WITec alpha300 R	KII-323	<a href="#">Johannes Ofstad</a>	<a href="#">WITec alpha300r</a>

## Surface and particle analysis

Type of equipment	Name of equipment	Location	Contact person	Link to more information
Surface and particle analysis	3Flex 3500	KII-107	<a href="#">Elin Albertsen</a>	<a href="#">BET</a>
Surface and particle analysis	TRISTAR 3000 surface area and porosity analyzer	KII-107	<a href="#">Elin Albertsen</a>	<a href="#">BET</a>
Surface and particle analysis	Permeabilitet	KII-303	Anne Støre (SINTEF)	
Zetapotential and particle size analyzer	Beckman Coulter DelsaNano C	<a href="#">KII-223</a>	<a href="#">Agnes C Digranes</a>	<a href="#">Description, terms of use &amp; user manual</a>
Surface analyzer	Drop Shape Analyzer - DSA100	KII-321	Johannes Ofstad	<a href="#">Description</a>
Laser scattering particle size analyzer	Horiba LA-960 Partica	KII-107	<a href="#">Eva Rise</a>	<a href="#">Description</a>
Micro Scratch Tester	ST Instruments B A	KII-321	Johannes Ofstad	
Density and volume analysis	Pycnometer	KII-107	<a href="#">Elin Albertsen</a>	<a href="#">AccuPyc II 1340</a>

## XRD

 [More information about the XRD lab](#)

Type of equipment	Name of equipment	Location	Contact person	Link to more information
XRD	Routine Powder Diffractometer (DaVinci1)	KII-113	<a href="#">Contact person</a>	<a href="#">Routine powder XRD</a>
XRD	Powder diffractometer (D8 Focus)	KII-113	<a href="#">Contact person</a>	<a href="#">9-pos Powder XRD</a>
XRD	Siemens D5005 with monochromator (A-unit)	KII-113	<a href="#">Contact person</a>	<a href="#">Siemens D5005</a>
XRD	Multipurpose Powder X-ray diffractometer (DaVinci2)	KII-113	<a href="#">Contact person</a>	<a href="#">Multipurpose XRD</a>
XRD	Non-ambient X-ray diffractometer (D8 Advance)	KII-113	<a href="#">Contact person</a>	<a href="#">Non-ambient XRD</a>
Texture Analysis	X-ray diffractometer	A-347	<a href="#">Viviann Hole</a>	<a href="#">Macrotexture XRD</a>

## Solar cell silicon characterisation

Type of equipment	Name of equipment	Location	Contact person	Link to more information
Si - Characterisation	Nicolet 6700 FT-IR	M-104	<a href="#">Chiara Modanese</a>	
Si - Characterisation	μLPCD resistivity life time measurement	M-104	Gaute Stokkan (SINTEF)	
Si - Characterisation	SiWaScan	M-104	Gaute Stokkan (SINTEF)	
Si - Characterisation	micro cracks characterisation	M-104	<a href="#">Kai Erik Ekstrøm</a>	
Si - Characterisation Crystal defect measurement	PVSCAN 6000	M-104	Gaute Stokkan (SINTEF)	
Si - Characterisation Density Imaging	CDI-Carrier	M-104	Gaute Stokkan (SINTEF)	

## Electrical resistivity measurement

Type of equipment	Name of equipment	Location	Contact person	Link to more information
Resistivity measurement (metals)	Sigmascope	E-508	<a href="#">Berit Vinje Kramer</a>	