

CVD	Univ. de Neuchatel	200	Textured TCO/glass	3.6- $\mu\text{m}$ , $\mu\text{c-Si}$ by PECVD at 100 MHz ( $\text{SiH}_4$ ), doping by $\text{PH}_3$ and $\text{B}_2\text{H}_6$ , ZnO/Ag back contact	8.5%, 1 $\text{cm}^2$ (1999) 13.1% a-Si:H/ $\mu\text{c-Si}$ 10.7% (1999)	Deposition rate <2 A/s, unstabilized, stabilized (other substrates possible)
	IMEC	>1000	p <sup>+</sup> SILSO	20- $\mu\text{m}$ film by thermal CVD, DARC, no texture, SiN passivation,	13.7%, 4 $\text{cm}^2$ (1997)	No H passivation 11.6%, 7.6% on SSP, 10.3% on RGS, 13.2% on EFG
	FhG-ISE	>1000	Silicon Sheets from Powder (SSP)	First deposition BSF, 30 micron by thermal CVD, no texture, no H passivation, SiN coating	8.00%, 4 $\text{cm}^2$ (1997)	Dep. Rate >10 $\mu\text{m}/\text{min.}$ , 11.1% on SiLSO, 17.4% on FZ (inverted pyramids, local emitter, thermal oxide)
	Ecole Polytechnique	150	Textured TCO/glass	Polymorphous standard <i>p-i-n</i> , 0.4–0.8 micron <i>i</i> -layer.	9.30%, 0. 1 $\text{cm}^2$	Mixed a-Si:H/ $\mu\text{c-Si}$ matrix
	Canon Co	200–400	n/r	Standard <i>n-i-p</i> structures, Ag/ZnO back contact, >1 micron thick <i>i</i> -layer, VHF PECVD.	7.4%, 0.25 $\text{cm}^2$ (1999) 11.5% a-Si:H/ $\mu\text{c-Si}$	Stabilized results
Excimer laser crystallization	Kaneka Co.	<550	Glass	Laser crystallization of 100-nm a-Si by PECVD ( $\text{B}_2\text{H}_6/\text{SiH}_4$ ), followed by <i>n</i> - and <i>p</i> -type $\mu\text{c-Si}$ and 6 micron intrinsic poly-Si (all PECVD), ITO front contact and Ag fingers.	10.1% 0.25 $\text{cm}^2$ (1997) 12.8% a-Si:H/ $\mu\text{c-Si}$ (1997)	Efficiency >14% expected

Note: n/r = not reported (proprietary reasons); BSF: back surface field; LPCVD: low pressure CVD; TCO: transparent conducting oxide; RGS: ribbon grown on substrate; EFG: edge-defined film-fed growth; ARC: antireflection coating; DARC: double layer ARC; SPC: solid phase crystallization; LPE: liquid-phase epitaxy