

Family	Application	Title - Description	Country	Patent No.
PolyMax™	Apparatus - Layer Transfer	Apparatus and Method of Temperature Control During Cleaving Processes of Thick Film	China	ZL 200810006997.6
PolyMax™	Apparatus - Layer Transfer	Apparatus and Method of Temperature Control During Cleaving Processes of Thick Film	USA	8222119
PolyMax™	Apparatus - Layer Transfer	Apparatus and Method of Cleaving Thin Layer From Bulk Material.	USA	9336989
PolyMax™	Apparatus - Layer Transfer	Substrate Cleaving Under Controlled Stress Conditions.	USA	9356181
PolyMax™	Apparatus - Layer Transfer	Substrate Cleaving Under Controlled Stress Conditions.	USA	9640711
PolyMax™	Process - Layer Transfer	Gettering Technique for Wafers Made Using a Controlled Cleaving Process	USA	6890838
PolyMax™	Process - Layer Transfer	Method for Fabricating Free Standing Thickness of Materials	China	ZL200810009149.0
PolyMax™	Process - Layer Transfer	Free-Standing Thickness of Single Crystal Material and Method Having Carrier Lifetimes	Korea (South)	10-1154133
PolyMax™	Process - Layer Transfer	Method and Structure for Fabricating Solar Cells Using a Thick Layer Transfer Process	China	ZL 200780022933.9
PolyMax™	Process - Layer Transfer	Layer Transfer of Films Utilizing Controlled Propagation	USA	8293619
PolyMax™	Process - Layer Transfer	Techniques for Forming Thin Films by Implantation with Reduced Channeling	USA	8329557
PolyMax™	Process - Layer Transfer	Method and Structure for Thick Layer Transfer Using A Linear Accelerator	China	ZL200780041135.0
PolyMax™	Process - Layer Transfer	Continuous Large-Area Scanning Implantation Process	China	ZL200780026734.5
PolyMax™	Process - Layer Transfer	Method And Structure For Thick Layer Transfer Using A Linear Accelerator	Japan	5409372
PolyMax™	Process - Layer Transfer	Layer Transfer of Films Utilizing Controlled Shear Region	China	ZL 200910138229.0
PolyMax™	Process - Layer Transfer	Free-Standing Thickness of Single Crystal Material and Method Having Carrier Lifetimes	China	ZL200910253033.6
PolyMax™	Process - Layer Transfer	Controlled Process and Resulting Device	USA	9159605
PolyMax™	Process - Layer Transfer	Layer Transfer of Films Utilizing Controlled Shear Region	USA	9362439
PolyMax™	Process - Layer Transfer	Layer Transfer of Films Utilizing Controlled Shear Region	Korea (South)	10-1656097
PolyMax™	Process - Layer Transfer	Method and Device for Slicing a Shaped Silicon Ingot Using Layer Transfer	USA	9460908
PolyMax™	Process - Layer Transfer	Method and Device for Slicing a Shaped Silicon Ingot Using Layer Transfer	USA	10087551
PolyMax™	Process - Layer Transfer	A Shape Silico Ingot Using Layer Transfer	USA	10,683,588
PolyMax™	Process - Layer Transfer	Layer Transfer of Films Utilizing Controlled Shear Region	USA	11,444,221
NanoCleave™	Apparatus - Layer Transfer	Method and System for Source Switching and In-Situ Plasma Bonding	USA	7078317
NanoCleave™	Apparatus - Layer Transfer	A Method and Structure for Implanting Bonded Substrates for Electrical Conductivity	USA	7399680
NanoCleave™	Process - Layer Transfer	A Method and Structure for Implanting Bonded Substrates for Electrical Conductivity	China	ZL2006101629001.1
NanoCleave™	Process - Layer Transfer	Method and Structure for Fabricating Bonded Substrate Structures to Remove Oxygen	Korea (South)	10-0996539
NanoCleave™	Process - Layer Transfer	A Method and Structure for Implanting Bonded Substrates for Electrical Conductivity	Taiwan	I-447785
NanoCleave™	Apparatus - Layer Transfer	An Apparatus and Method for Controlled Cleaving	Korea (South)	0
NanoCleave™	Apparatus - Layer Transfer	An Apparatus and Method for Controlled Cleaving	China	ZL200580002085.6
NanoCleave™	Apparatus - Layer Transfer	Substrate Stiffness Method and Resulting Devices - Controlled Cleaving	USA	7772088
NanoCleave™	Apparatus - Layer Transfer	Substrate Stiffness Method and Resulting Devices - Controlled Cleaving	China	ZL200680014752.7
NanoCleave™	Apparatus - Layer Transfer	Substrate Stiffness Method and Resulting Devices - Controlled Cleaving	USA	8241996
NanoCleave™	Apparatus - Layer Transfer	Substrate Stiffness Method and Resulting Devices - Controlled Cleaving	Taiwan	I-428956
NanoCleave™	Apparatus - Layer Transfer	Substrate Stiffness Method and Resulting Devices - Controlled Cleaving	Japan	5988389
NanoCleave™	Apparatus - Layer Transfer	Substrate Stiffness Method and Resulting Devices - Controlled Cleaving	Germany	EP1894234B1 (DE)
NanoCleave™	Apparatus - Layer Transfer	Substrate Stiffness Method and Resulting Devices - Controlled Cleaving	France	EP1894234B1 (FR)
NanoCleave™	Apparatus - Layer Transfer	Substrate Stiffness Method and Resulting Devices - Controlled Cleaving	Great Britain	EP1894234B1 (GB)
NanoCleave™	Apparatus - Layer Transfer	Substrate Stiffness Method and Resulting Devices - Controlled Cleaving	Ireland	EP1894234B1 (IE)
NanoCleave™	3DIC - Device Layer Transfer	Method and Structure for Fabricating Devices Using a Layer Transfer Process	USA	7166520
NanoCleave™	3DIC - Device Layer Transfer	Method and Structure for Fabricating Devices Using a Layer Transfer Process	USA	7351644
NanoCleave™	3DIC - Device Layer Transfer	Method and Device for Controlled Cleaving Process	USA	7470600
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit	Germany	20 2016 000 166.4
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit	China	ZL 2016200241337
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit (Patterned Implant)	Taiwan	M542244
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit (Coolong Channel)	USA	9704835
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit	China	ZL2016211104051
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit (Mixed die stacking and planarization)	USA	10049915
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit	Taiwan	M588362
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit (Layer transfer/annealing)	USA	10,573,627
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit (Cooling Channel)	USA	10,804,252
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit	Taiwan	1716864
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit (Layer transfer/annealing)	USA	10,923,459
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit (Interconnect Network Layer/replace RDL)	USA	11,410,984
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit (Range comensation implants)	USA	11,626,392
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit	Japan	7328221
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit	Korea (South)	10-2578576
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit (Interconnect Network Layer/replace RDL)	USA	(TBD)
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit	China	Pending
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit	EPO	Pending
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit (SiGe Stress Plane)	USA	Pending
NanoCleave™	3DIC - Device Layer Transfer	Three Dimensional Integrated Circuit (Interconnect Network Layer/replace RDL)	PCT	Pending