

## Laue Single Crystal Orientation Tool

The system allows real time software and does not require a frame grabber.

It allows very fine crystal alignment down to 0.2 degree accuracy using our standard Laue orientation tool. 0,02 degree misalignment can be measured using our micro diffraction set up.

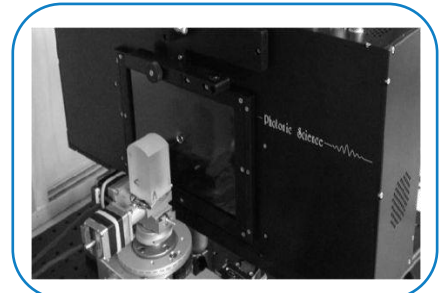
Combined with motorised single crystal rotation / translation, the system brings simpler and more flexible crystal orientation routines before and after cutting /slicing procedures.

An automatic software routine will derive orientation / misalignment of sapphire, silicon, YAG and other materials which undergo high throughput production.

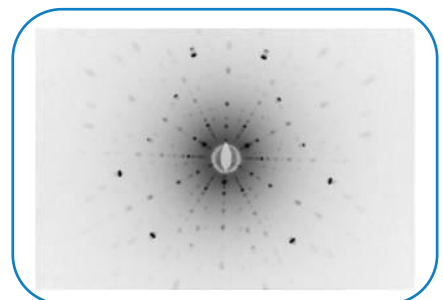
The system comes as a turnkey solution or as an up grade to existing Polaroid LAUE sep ups.

### APPLICATIONS

- Real-time Crystal Orientation down 0.2 degrees accuracy
- Misalignment measurements down 0.02 degrees using PSL orientation software
- Discrimination between crystallographic orientations of the same crystal
- High throughput sample screening using automated scanning stages
- Heavy duty sample goniometer holding up to 20kg samples



Sapphire sample mounted on 5 axis motorized goniometer



Sapphire C-axis aligned

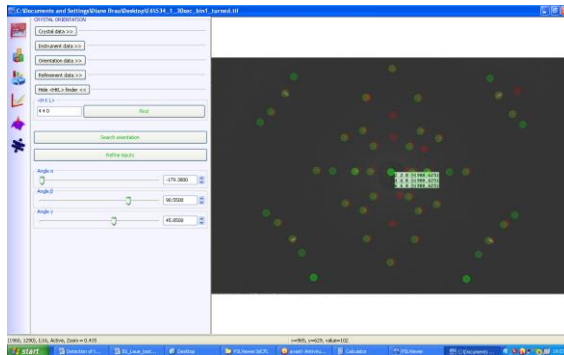


SiC hexagon aligned

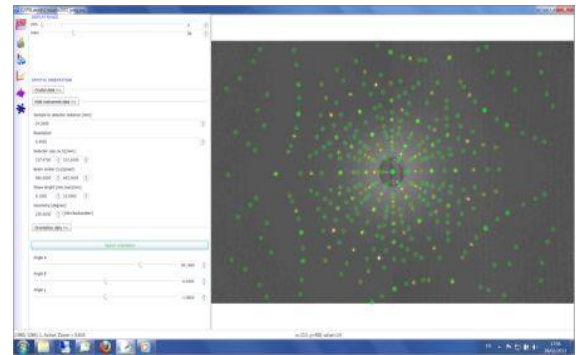
### Graphical User Interface

- Detects automatically diffraction spots and calculate spot position against reference crystal
- Calculate mis orientation against goniometer & crystallographic axis automatically (no manual fit of distorted patterns)
- Saves angular measurements in CSV format for further Quality Assurance traceability
- Top to Bottom end user menu allowing step by Step validation of the orientation procedure for non initiated crystallography users
- Python based software allowing remote access control from existing software / system using socket commands

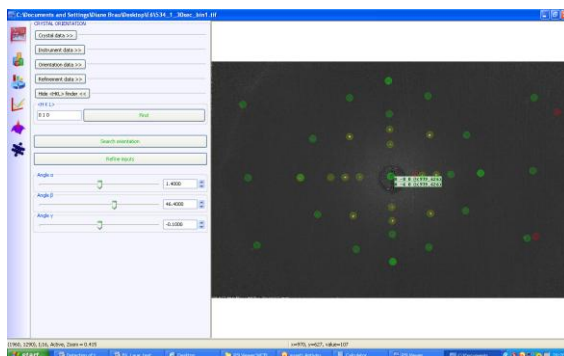
Pos.	Scan over $\beta$	Read out $\alpha$	Read out $\beta$	Read out $\gamma$
1	0.12	90.42	0.70	43.91
2	0.16	90.43	0.75	43.90
3	0.20	90.41	0.79	43.89
4	0.24	90.42	0.83	43.92
5	0.28	90.41	0.88	43.94



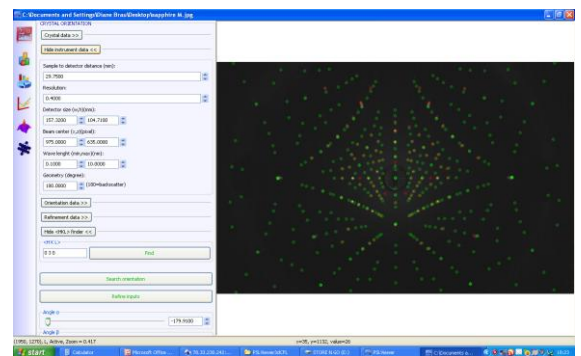
Cubic 110



Sapphire C 001



Cubic 0-10



Sapphire M 010