

## ANNOUNCEMENT

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### The ASH2 by RMC Boeckeler

The ASH2 is capable of capturing hundreds of serial sections for high volume array tomography and correlative 3D workflows. Featuring three axes of orientation, the ASH 2 saves user time with a fast alignment process, collecting long ribbons of sections directly onto the substrate of choice for subsequent imaging in the light or scanning electron microscope.



Designed by RMC Boeckeler with the convenience of the end-user in mind. Supplied with a carrying case, the lightweight ASH 2 can be easily transported from one ultramicrotome to another, quickly converting it to an array tomography system.

#### **ASH2 advantages**

- Requires no complex set up, quickly locks onto any current ultramicrotome knife stage, converting it to a serial section collection system for SEM and LM 3D reconstruction.
- Holds the substrate of your choice, from standard glass slides to various sized silicon substrates.
- The Loading Station quickly locates the substrate into ASH2 clamping system, keeping it clean.
- Accommodates standard diamond knives, which take 10x 25mm substrates.
- For larger arrays, the optional Jumbo diamond knife will accept 25x25mm substrate squares.
- X, Y, Z axes of orientation safely manipulate the substrate close to the knife edge.
- Water filling and removal system provides the perfect water level for sectioning as well as precise water removal for lowering sections down onto substrate.
- Capable of handling hundreds of sections on one substrate.

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### Save time!

- With ASH2 you can prepare one substrate of a hundred or more sections and check just that one volume. If you capture the ROI then you need go no further - very fast accrual of 3D data.
- Sections can be archived and reused many times

### Improved images for your report/paper

- No need for block to be dosed with high levels of heavy metals prior to sectioning, like some other techniques.
- Contrasting can be carried out after sectioning, which may provide better structural morphology.
- Fluorescence techniques for LM can be employed.
- Immunolabelling for EM is also possible on the array.
- If one wafer is not enough, you can continue onto other wafers to increase the volume or use ATUMtome to produce high sample volumes, with fully automated sample collection.

### Results \*

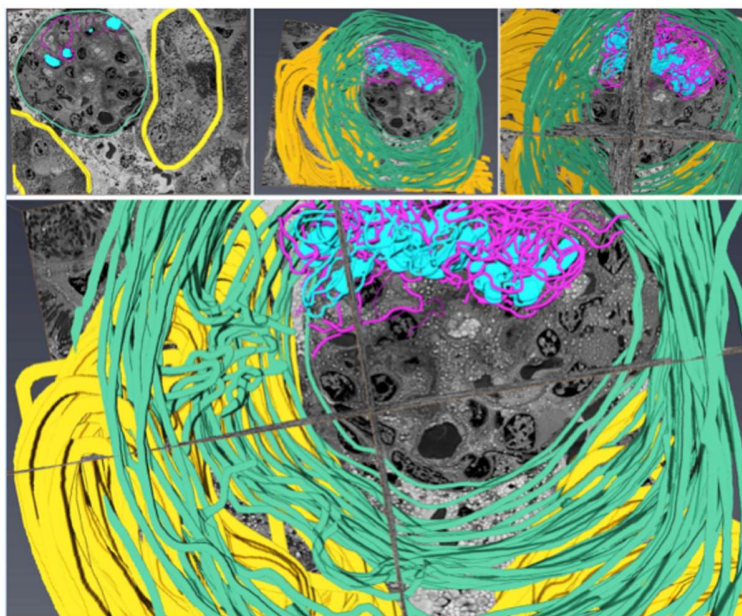


Figure 3: 3-D tomograms produced by array tomography using serial sections from a sample of mouse renal cortex. Bowman's capsule outlining a glomerulus (green), adjacent tubules (yellow), the glomerular basement membrane (magenta, blue) and glomerular cells (blue) with a background BSD "TEM-like" image from the final layer.

\*3D array prepared on ASH100 by  
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Boeckeler Instruments – The Ultramicrotome Company – develops, manufactures and distributes sample preparation equipment for nanoscale research, under the RMC Boeckeler brand. We're a small, passionate team, based in Tucson, Arizona, dedicated to the science of nanotechnology as well as providing outstanding customer service.

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