

Nano Science, Technology and Industry Scoreboard

Picosun and Chinese Hospitals Use Medical Technology for Safer Surgeries

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To enhance performance, safety and service life, Picosun's biocompatible ALD coatings will be applied on electrosurgical equipment (electrotomes).

Electrotome is standard equipment that can substitute traditional mechanical scalpels in many operations and uses high temperature to cut and separate tissue while aiding in blood coagulation.

Picosun Group CTO Dr Jani Kivioja said: "We are happy to extend our PicoMEDICAL technology to a yet new healthcare application, and to work with top tier Chinese hospitals and scientists to qualify our solutions in everyday use.

"We at Picosun want to use our extensive ALD know-how to develop solutions to improve people's health and quality of life, which is why medical ALD is one of our key markets for the future."

Usually, tissue and blood sticking and burning on the electrotome blade poses a serious threat as crusted blade increases risks of bleeding, tissue damage, tearing and scarring. This also can lead to extended healing time for patients who undergo surgery.

Apart from this, smoke from the burning tissue can obstruct the surgeon's vision and

increase the risk for error during delicate procedures. So far, no working solution is available in the market to overcome this problem.

ALD technology provides a working solution to this issue and can enhance patient safety, wound quality and healing time.

Biocompatible ALD film deposited over anti-adhesive micropatterning of electrotome blade can prevent blood and tissue from sticking to the blade.

ALD forms ultra-thin, pinhole-free coatings with unmatched conformality over the smallest microscale details of the surface. Such processes can be carried out at moderate temperatures making it suitable for sensitive materials.

Read the <u>original article</u> on Medical Device Network.