

## **Mesophotonics releases Klarite Surface Enhanced Raman Substrates**

**Southampton, UK– 24 January 2005** Mesophotonics Ltd, a developer of disruptive photonic crystal technology, announced at Photonics West 2005 the release of its Klarite substrates for surface enhanced Raman Spectroscopy (SERS). Offering unparalleled levels of reproducibility, Klarite SERS substrates, mounted on standard 3” glass slides, allow the unique Raman finger print present in all molecules to be easily and repeatedly identified. Klarite substrates enable faster, higher accuracy detection of biological and chemical samples at lower detection limits for a wide range of markets including homeland security, forensics, environmental monitoring, medical diagnostics and drug discovery.

Previous SERS substrates have been plagued by 100% signal variations and by hot spots where only small areas of the total device showed amplified Raman signals. Systematic nanometre scale patterning of the Gold surface of the new Klarite substrates forms photonic crystals which fundamentally control the physics of the Raman amplification process. By leveraging their experience of photonic crystals and semiconductor manufacturing, Mesophotonics is able to tightly control the surface enhanced Raman amplification process producing consistent SERS signals. Raman signal variations of less than 15% have been consistently measured without any data selection.

Klarite substrates are completely compatible with existing micro-Raman instruments. However, the SERS signals that are generated from Klarite substrates are many orders of magnitude more intense than traditional Raman signals and enable detection with low sensitivity detectors and low power lasers. This will open the door to the development of low cost Raman detection systems compatible with volume OEM applications.

John Lincoln, Mesophotonics Business Development Director commented, “We believe that Klarite substrates offer a new method of controlling surface enhanced Raman amplification that provides the reproducibility necessary for a vast range of detection applications”.

### **About Mesophotonics**

Mesophotonics is commercialising breakthrough photonic crystal technology that allows light to be bent, routed and processed at sub-millimetre scale. The company was founded in 2001 by a team of 7 founders from 3 departments at the University of Southampton with expertise in modelling fabrication design and characterisation. Venture capital funding is provided by Quester Capital Management (London), BTG (London), Auriga Partners (Paris) and NIF (Tokoyo).

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