

News from Renishaw

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For immediate release

Molecular visualisation and analysis is now a step closer

A new OEM agreement between Renishaw plc (UK) and NT-MDT (Russia) establishes a framework for bringing nano-scale imaging and analysis to researchers

During the recent International Raman Microscopy Conference (ICORS XXI) in London, Dr. Ken Williams of Renishaw plc (UK), and Dr. Andrew Shubin of NT-MDT (Russia) signed an OEM agreement, whereby NT-MDT will sell, install, and support special inVia Raman systems for integration with its *NTEGRA* AFM. This alliance between two forward-thinking companies provides an unsurpassed nanotechnology visualisation and analysis system for research and industry.

A survey of over 75 key scanning probe microscope (SPM) users (A.D.Little 2007) showed clearly that SPM is seen as complementary to light microscopy, with the main differentiator being its nano-scale resolution and ability to measure physical properties - especially under controlled conditions (e.g. temperature, humidity, pressure). Chemical analysis can now be added to this list through the use of conventional confocal Raman spectroscopy for micrometre resolution, and tip-enhanced Raman scattering (TERS) for molecular resolution.

The stringent requirements for investigation of materials at the molecular level are met by every element of the NT-MDT AFM design. The geometry of the system makes it perfectly suited for confocal Raman spectroscopy and TERS because it can scan the sample and laser. Additionally the fundamental design of the AFM head, innovative use of special low thermal expansion coefficient materials, and use of precision electrical components for the closed loop feedback scanning system, all contribute to an AFM with exceptionally low drift. Finally the high stability of the NT-MDT AFM, vital for molecular resolution, guarantees that it can look at *the same atoms for hours*.

Dr. Shubin (VP Marketing for NT-MDT) describes the new OEM systems as “the key to open the door to nano-scale analysis.” The Renishaw/NT-MDT integrated Raman-AFM sets the standard for nano-engineering tools.

For further details about Raman-AFM please contact Ian Hayward (ian.hayward@renishaw.com, +44 1453 523833) or visit www.renishaw.com/raman; or Yana Prima (yana@ntmdt.ru, +7 495 913-57-36/37/38) or visit www.ntmdt.ru

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Notes to editors

Renishaw profile

Renishaw is a world leader in metrology and spectroscopy technologies, with a strong history of innovation in product development and manufacturing.

Since its formation in 1973, Renishaw has supplied companies small and large, worldwide, with innovative products that increase process productivity, improve product quality, and deliver cost-effective automation solutions.

A high level of investment in research and development (R&D) has resulted in developments across a wide range of other product areas, including Raman microscopes for the spectral analysis of materials. Total annual expenditure on R&D, including related engineering costs, now amounts to 17% of turnover.

With more than 50 operations in 30 countries, and over 2,100 employees, Renishaw's customers are strongly supported throughout the world with outstanding technical expertise and service.

NT-MDT profile

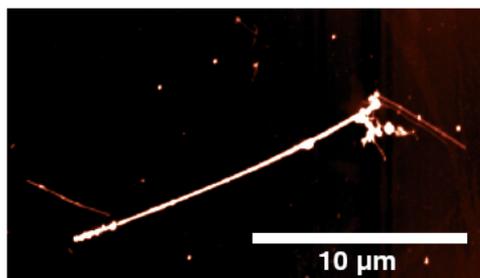
Since its foundation in 1989 NT-MDT has had over 17 years experience in designing, building, and selling SPMs to meet the requirements of all market sectors, and is now recognised as the dominant market leader in Russia and occupies a strong position in Europe.

NT-MDT is also a distributor in Russia for a number of companies offering complementary technologies; its intention is to be a "one-stop-shop" for people wishing to invest in nanotechnology.

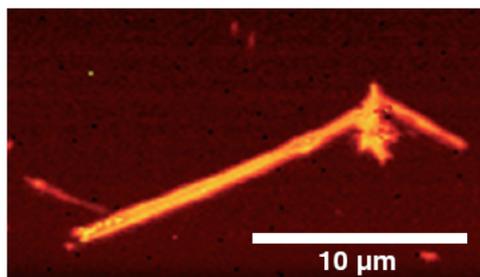
NT-NDT's mission is to enable researchers, engineers, and developers to conduct nano-scale research by creating nanotechnology instrumentation that meets the evolving needs. This requires a global perspective that takes into consideration the needs of students in the classroom, the researcher at the cutting edge in the laboratory, and the practicalities of industrial R&D.

Images

Images are available of the inVia/NTEGRA system, and example images of nanowires.



AFM topography image of nanowire



Corresponding Raman image of nanowire

For further information

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