One of the current frontiers in the chronobiology of biology and medicine specifically looks toward light as a noninvasive therapy against a wide range of diseases. Spectroscopic methods, in particular, are garnering significant interest in both research and clinical use, thanks to the broad range of modalities they can provide. This cannot be achieved with current methods, which are mainly based on angle or time of flight, or even with the combination of the two. This approach represents a significant improvement by offering a novel modality of complementary imaging.

Multi-Modal Spectroscopic Methods are on an Inevitable Rise. A type of research at the University of Freiburg developed a new method for optically detecting nanoparticles of various sizes and shapes. The method, based on the elastic scattering of light, uses a transgenic mouse model that expresses a fluorescent protein. This approach has the potential to revolutionize the field of optogenetics, with applications ranging from cancer treatment to neurodegenerative diseases.

Holographic Nanoscale Spectroscopy. Holographic techniques have been used to create a new method for measuring the size and shape of particles at the nanoscale. The method uses a combination of holographic interferometry and computer-generated holography to create a 3D reconstruction of the particles. The technique has the potential to revolutionize the field of nanoscale imaging, with applications ranging from materials science to biotechnology.

Molecular Microscopy Using Light. Microscopy using light is a highly effective tool for imaging biological samples. It allows for high-resolution imaging of biological samples, even at high magnification. The use of multiphoton microscopy, for example, has the potential to revolutionize the field of imaging, with applications ranging from developmental biology to cancer research.

Featured Products & Services

Photoacoustic Microscopy System. Photoacoustic microscopy is a highly effective tool for imaging biological samples. It allows for high-resolution imaging of biological samples, even at high magnification. The use of multiphoton microscopy, for example, has the potential to revolutionize the field of imaging, with applications ranging from developmental biology to cancer research.

More News

Microscopy Method Uses Laser Light to Image Molecules with Ultrahigh Contrast. A new method for imaging molecules using laser light has been developed. The method uses a combination of laser pulses and interferometry to create a 3D reconstruction of the molecules. The technique has the potential to revolutionize the field of imaging, with applications ranging from materials science to biotechnology.

JST Project Looks to Light-Nanowire Sensors for Ambient Sensing. A project led by the Japan Science and Technology Agency (JST) is looking to develop a new type of sensor that uses light-nanowire interactions. The sensors have the potential to revolutionize the field of ambient sensing, with applications ranging from environmental monitoring to medical diagnostics.

Photobiological Research. A new method for photobiological research has been developed. The method uses a combination of laser pulses and interferometry to create a 3D reconstruction of the molecules. The technique has the potential to revolutionize the field of imaging, with applications ranging from developmental biology to cancer research.

Upcoming Webinars

Spectroscopy Techniques. Spectroscopy is a highly effective tool for determining the chemical composition of materials. It allows for high-resolution imaging of biological samples, even at high magnification. The use of multiphoton microscopy, for example, has the potential to revolutionize the field of imaging, with applications ranging from developmental biology to cancer research.

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