

Double Helix Optics – Video Script

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Inspiration: Discover the Unknown

Humanity’s greatest journey has always been the path to discovery. We’ve asked big questions that have led us to venture far beyond our atmosphere and deep inside molecules—the building blocks of all matter and life.

The Challenge

But since the invention of the optical microscope in the year 1665, the diffraction of light limited the resolution of light microscopy. For over 300 years, the diffraction barrier made it impossible to see the details of cellular structures.

This radically changed when super-resolution imaging broke the diffraction barrier. This grand achievement enabled us to see nanoparticles for the first time. The technology came with new limitations, however, unable to capture depth information. It was limited to 2 dimensions.

Solution

But now Double Helix Optics has overcome this challenge. Our patented technology and family of products deliver 3D nanoscale imaging with unparalleled depth and precision.

While super-resolution imaging gave us the power to view an entirely new world of information, Double Helix Optics gives it completeness—the ability to see structures in their entirety. In single snapshots we can now see more detail from the whole cell... down to a single molecule.

And because all structures are inherently 3D, we can truly see our molecular world like we’ve never seen before.

The Double Helix SPINDLE 3D imaging system can be added onto any widefield microscope with minimal setup.

A library of user-changeable Phase Masks engineer point spread functions to convert 2D images into 3D information sets. By giving you options, you gain full control of your experiment.

Double Helix 3DTRAX software takes the 3D information captured by the SPINDLE and automatically calculates the position of particles in all 3 dimensions. It automates 3D calibration, localization, drift correction, and alignment to enable super-resolution image reconstruction and particle tracking with unprecedented precision and depth.

By drawing more data from a single snapshot, the Spindle lowers photo-toxicity and delivers the sharpest, most precise image possible.

The result? You will capture more high-quality data in a shorter amount of time, revolutionizing your research potential.

New product info, written by the client, was recently added here.

Conclusion: Inspiration

Double Helix 3D imaging takes you into the depths with precision—so you can accelerate discovery in scientific research, drug development and industrial inspection.

We can now view nanoscale structures we’ve never been able to access before. It’s an opportunity to discover the unknown. What will you discover....?