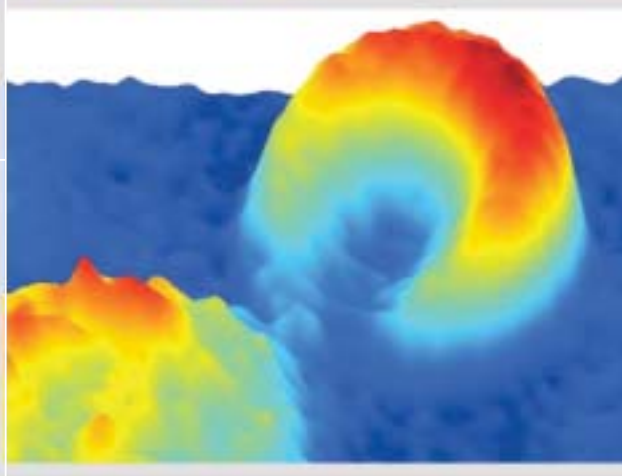
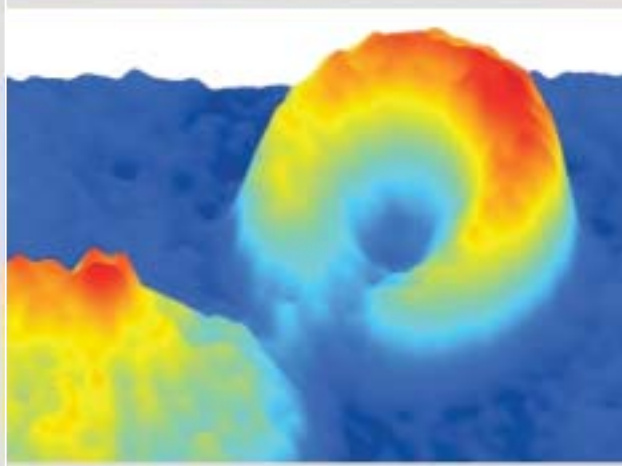
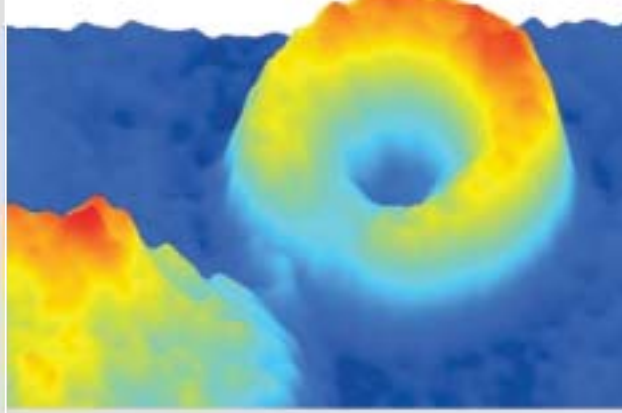


An innovative microscopy technique is now revealing the secret lives of living cells...

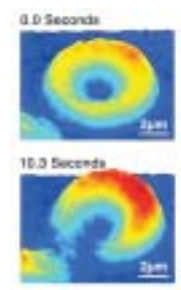


A nano view of live cells in action

Electron microscopy has been useful for studying cells at the nanometer level—but not *living* cells.

Now, Hamamatsu and a research team headed by Michael Feld have developed a solution: *Quantitative phase microscopy* is able to observe and measure living cell dynamics. To a fraction of a nanometer. Millisecond by millisecond!

The technique creates holograms by combining light passing through the subject with reference light. And a high-speed camera captures the precisely-measurable moving images in real time.

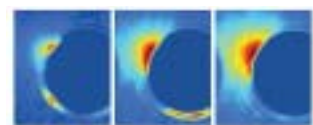


As it interacts with a white blood cell this red blood cell changes into a crescent shape.

Hamamatsu is opening the new frontiers of Light * * *

Unlocking cellular secrets

Being able to analyze and measure the intimate workings of living cells may well open important new doors: Enabling a deeper level of cell-based



A membrane rupture in this red blood cell is allowing hemoglobin to flow out.

research. And perhaps earlier diagnoses of diseases such as cancer and Alzheimer's.

The promise of quantitative phase microscopy is to unlock more of the body's cellular secrets.

And this is just one more example of how Hamamatsu—for over fifty years—has been helping to open the new frontiers of Light.

<http://jp.hamamatsu.com/en/rd/publication/>

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