



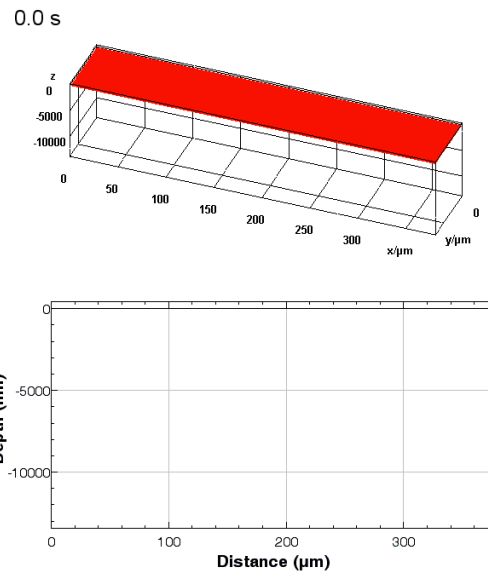
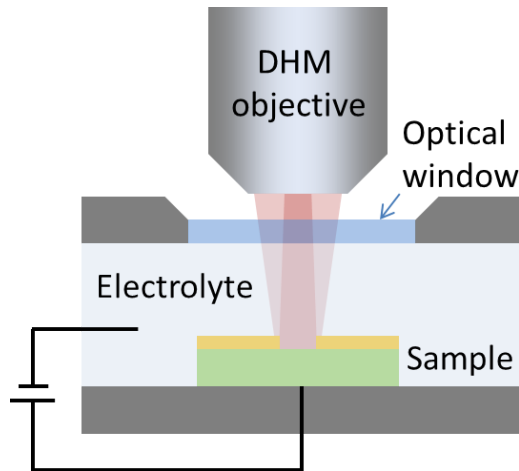
# First in-situ 4D monitoring in liquids thanks to DHM®

Seminal publications demonstrating Digital Holography Microscopes (DHM®) ability for performing 4D topography **with interferometric resolution**:

- **LIVE**: 194 fps, and up to 14 kfps in option, with 1 MPixel resolution.
- **IN-SITU**: in liquid and through optical windows.

## Wet etching parameters live optimisation by DHM®

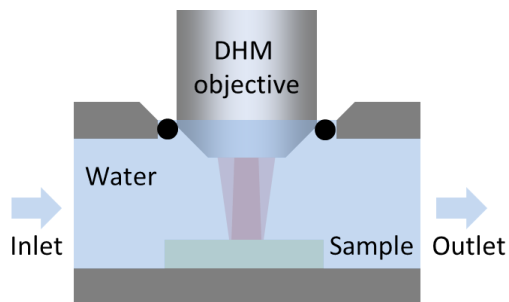
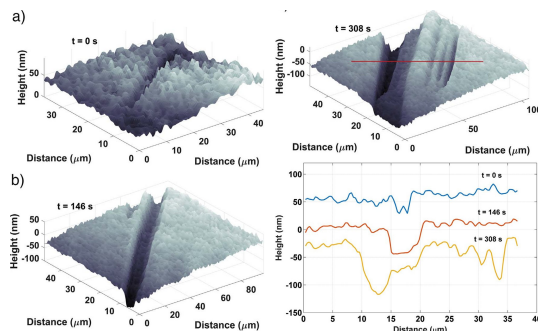
Wet electrochemical etching is monitored with interferometric vertical resolution and sub-micron lateral resolution. This application can be extended to dry and plasma etching.



**Publication:** *Laterally resolved in situ 4D topography of electrochemical etching by Digital Holographic Microscope, Oral presentation and Proceeding of MNE2017, Braga, Portugal.*

## In-situ nanoscale quantification of mineral dissolution

DHM® allows immersion measurement under flowing water environment for long time monitoring of in-situ mineral dissolution at nanoscale using water immersion objectives.



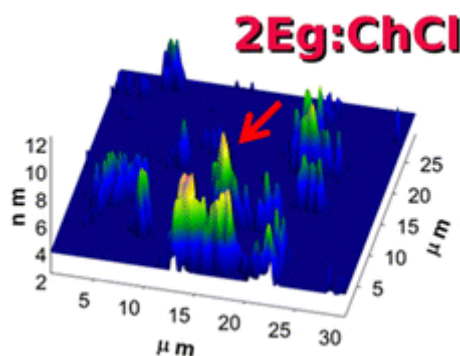
**Publications:** *In situ nanoscale observations of gypsum dissolution by digital holographic microscopy, Chemical Geology, Volume 460, 5 June 2017, Pages 25-36*

## Real time investigation of electrochemical deposition

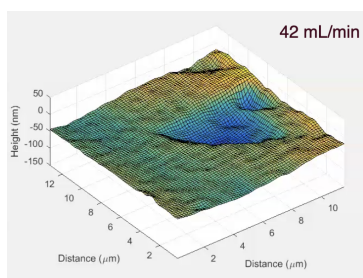
DHM® is a new analytical tool for in-situ analysis of kinetic mechanism and growth during electrolytic deposition processes.

Electro-crystallization of a metal on a substrate.

*Check out more!*



**Publication:** *In Situ Electrochemical Digital Holographic Microscopy; a Study of Metal Electrodeposition in Deep Eutectic Solvents*, *Anal. Chem.*, 2013, 85 (14), pp 6653–6660 DOI: 10.1021/ac400262c



**Professor Jeffrey W. Bullard**  
Materials Laboratory  
Center for Infrastructure Renewal  
Texas A&M University  
College Station, Texas USA

*"Our Lyncée Tec R2100 Digital Holographic Microscope has given our lab unique capabilities for kinetic measurements of dissolution and growth processes at solid-liquid surfaces. We combine the rapid hologram acquisition rate with a liquid flow-through cell to make in-situ measurements of dissolution rates. This enables us to characterize the rate distribution at different locations on surfaces and also to capture the rapid changes in rates that often are observed as the near-surface solution composition evolves."*



**Dr. Pan Feng**  
Jiangsu Key Laboratory of Construction  
Materials, School of Material Science and  
Engineering, Southeast University, China

*"DHM is an ideal instrument for in situ nanoscale observation of mineral dissolution. It instantaneously provides quantitative 3D topography measurement in liquid environment to allow us study dissolution rate from milliseconds time resolution to long time monitoring. The obtained results agree well with our simulations and other literatures. I am glad to work with Lyncée Tec who provides not only the instrument but also professional support on measurement of challenging samples."*

### Book a DHM live-demo and help our forests!

Do you want to discover our product while avoiding unnecessary travels and interaction during the COVID-19 situation?

Until returning to normality, for any stand-alone DHM® purchased based on a **remote live-demo**, Lyncée Tec commits to plant **200** trees through the non-profit organization [OneTreePlanted](#) and to provide you with a certificate.

Contact us to book a live demo!



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