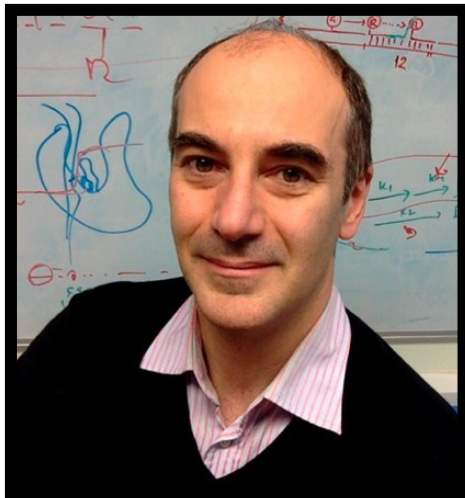


FERMENTATION WEBINAR

Wednesday, November 18, 2020 - 1:00 PM

Join Zoom Meeting | Meeting ID: 945 7478 0753 | Passcode: 8QWxzG

<https://zoom.us/j/94574780753?pwd=RVRtWDI5SDU0VW9tUTBCbyswcU1QUt09>



Dr. Achillefs Kapanidis

Professor of Biological Physics
Clarendon Laboratory, Dept of Physics,
Oxford University

Host: Richard Ludescher, Food Science Department

Single-molecule fluorescence studies on the Nanoimager platform: methods, applications, opportunities

Summary:

Single-molecule fluorescence imaging has transformed our understanding of biological mechanisms while underpinning many popular methods for super-resolution microscopy. To make such imaging more accessible to non-physicists, we have developed the Nanoimager, a robust and miniaturised microscope suitable for most in vitro and in vivo single-molecule fluorescence studies. I will briefly discuss the invention of the Nanoimager and provide examples of its use in studying bacterial mechanisms and developing new methods for ultrasensitive biodetection, including rapid coronavirus detection.

Biography:

Achilles Kapanidis completed his PhD in Biological Chemistry at Rutgers. After holding research scientist positions in single-molecule biophysics at Berkeley and UCLA, he became a senior lecturer at Oxford Univ in 2005, and then a Professor of Biological Physics in 2013; Prof Kapanidis has also been a European Research ERC grant holder and a Wellcome Trust Investigator. Prof Kapanidis is leading a group of physical and biological scientists (the "Gene Machines" group) which studies microbial biological machinery in gene expression and maintenance, with a focus on transcription and DNA repair. Prof Kapanidis has also been pursuing miniaturized single-molecule imaging, a project that culminated in the formation of the Oxford Nanoimaging spin-out.

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