

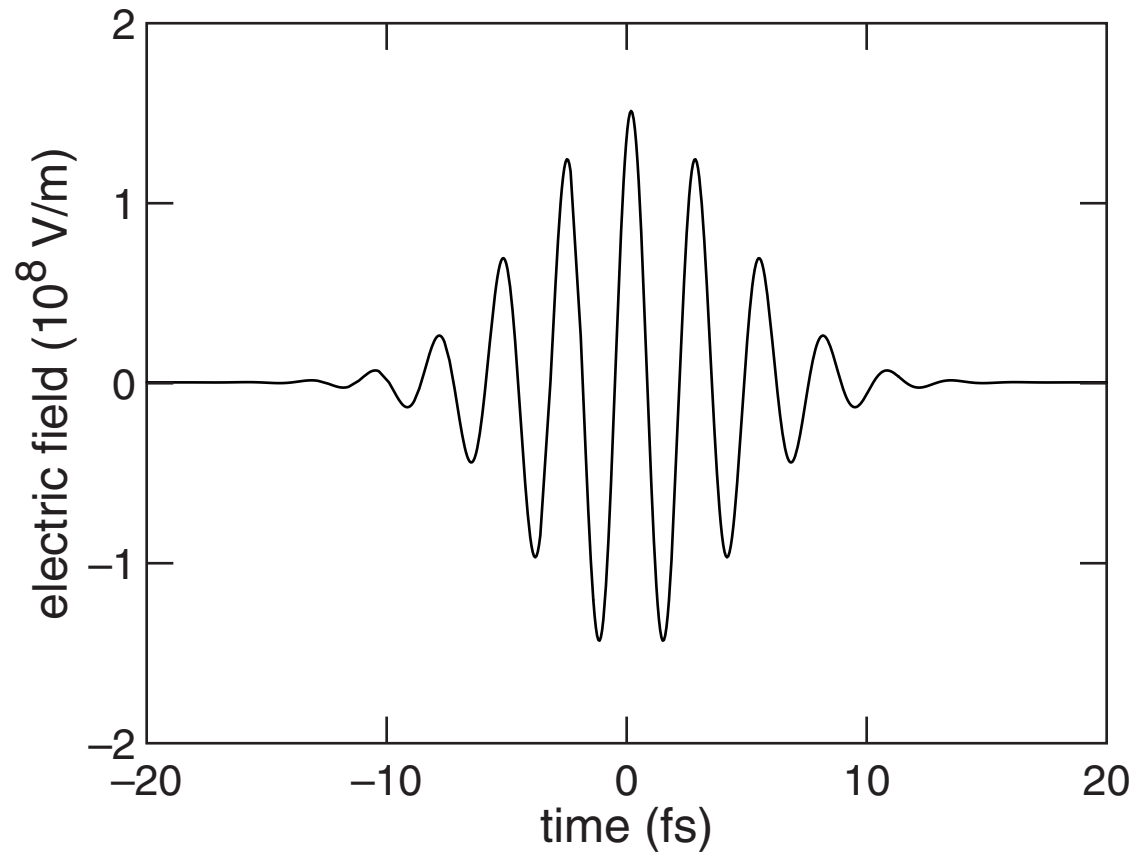
Manipulating matter with light

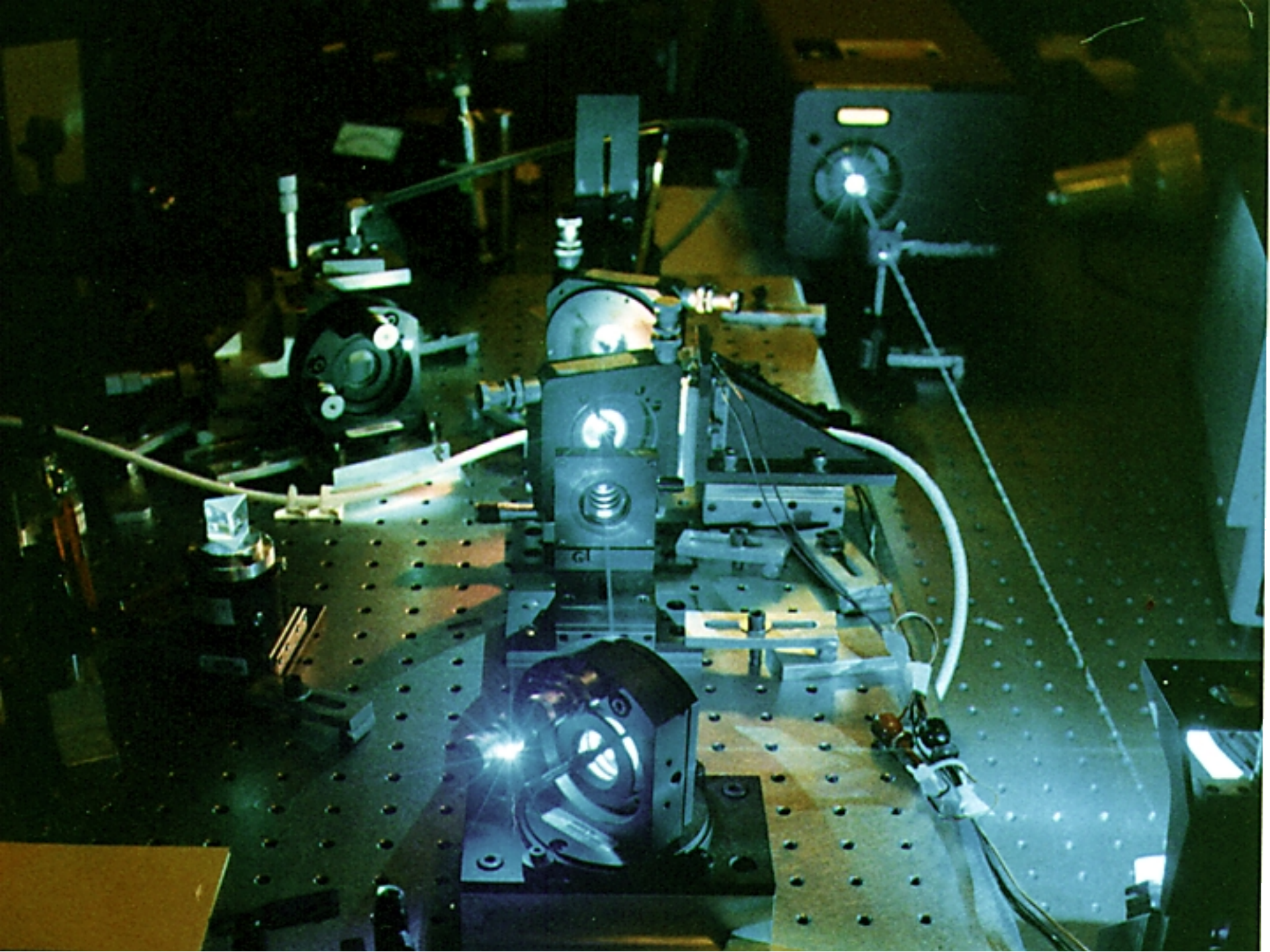
**Eric Mazur
DEAS/Physics**

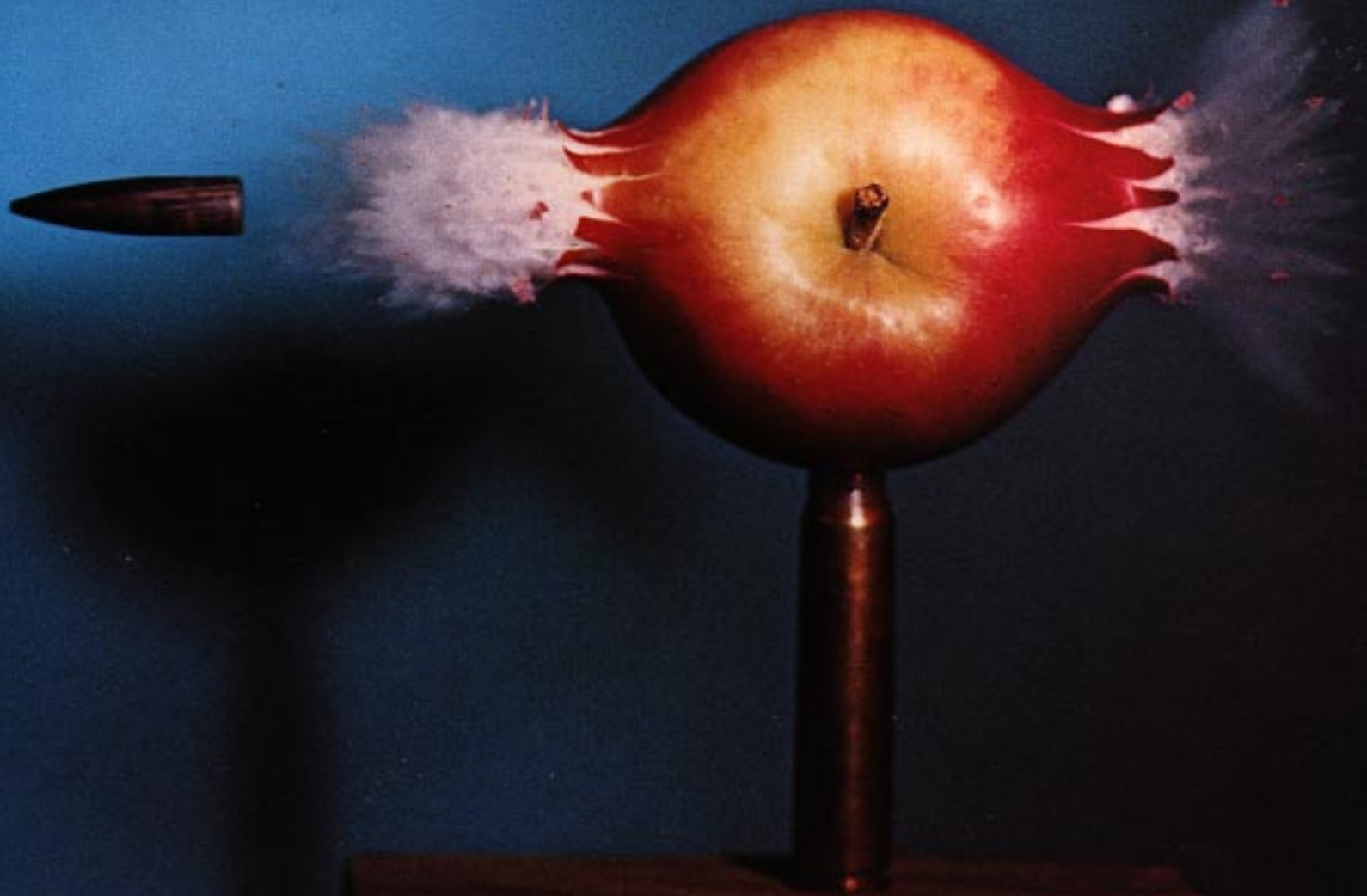


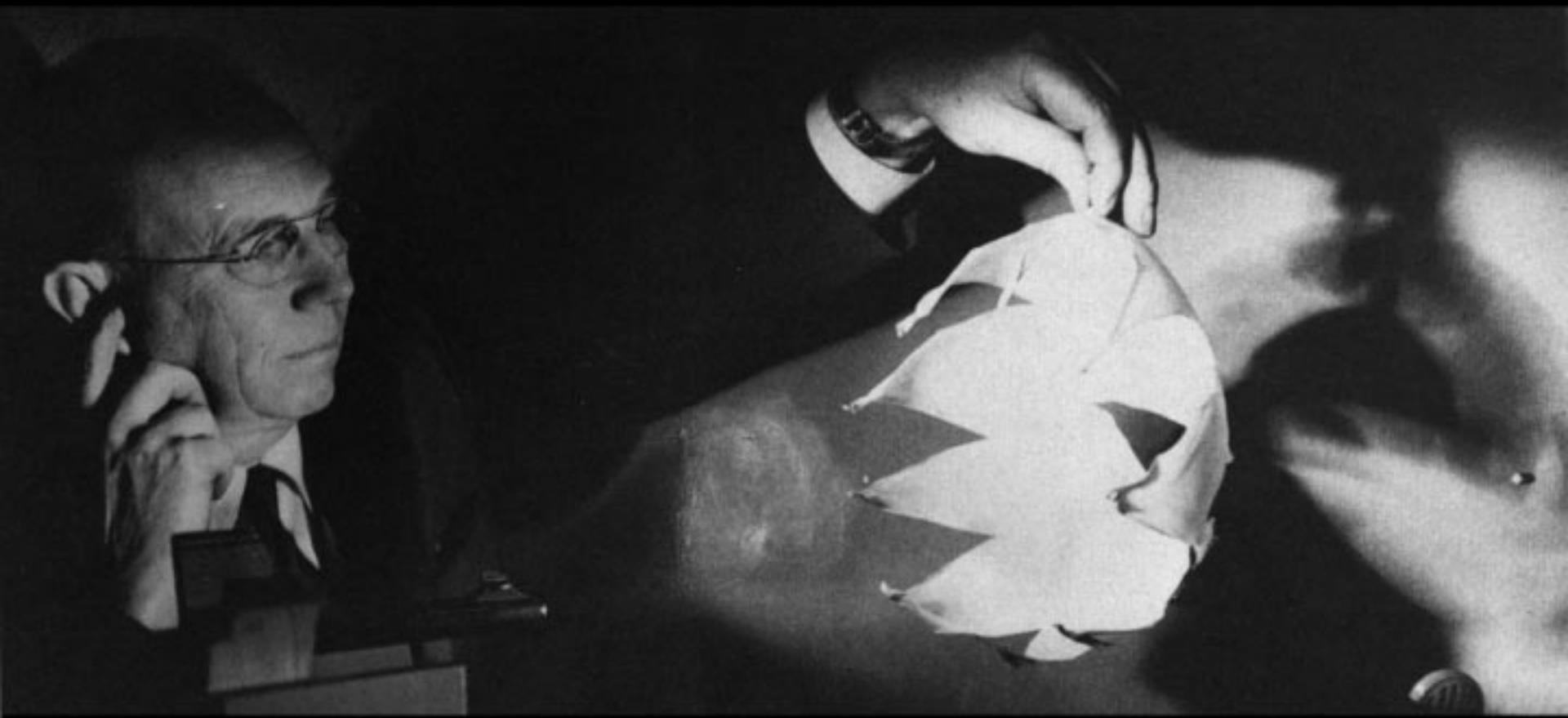
**Alumni Affairs and Development Staff Conference
Cambridge, 19 June 2002**

Introduction



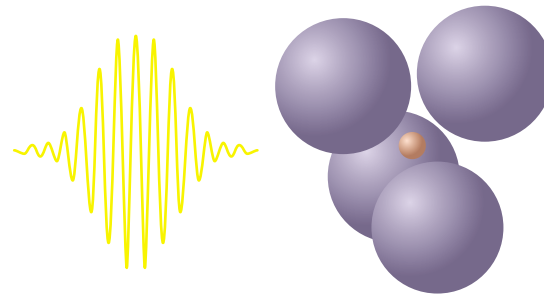






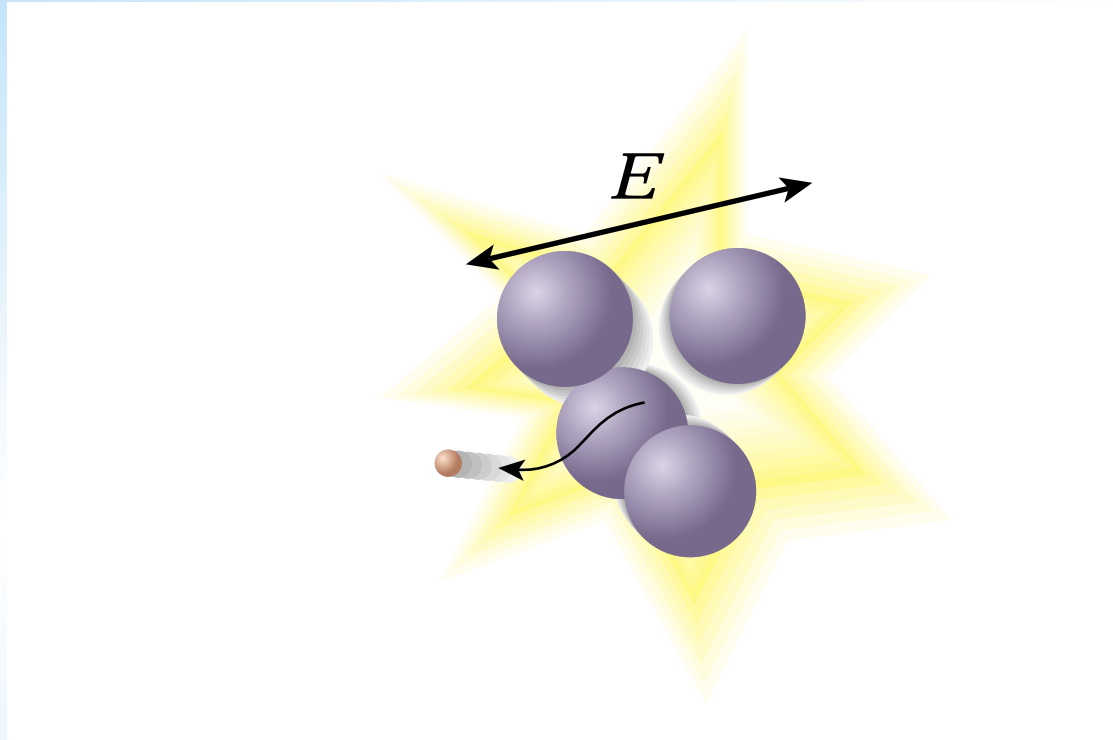
Introduction

light-matter interactions

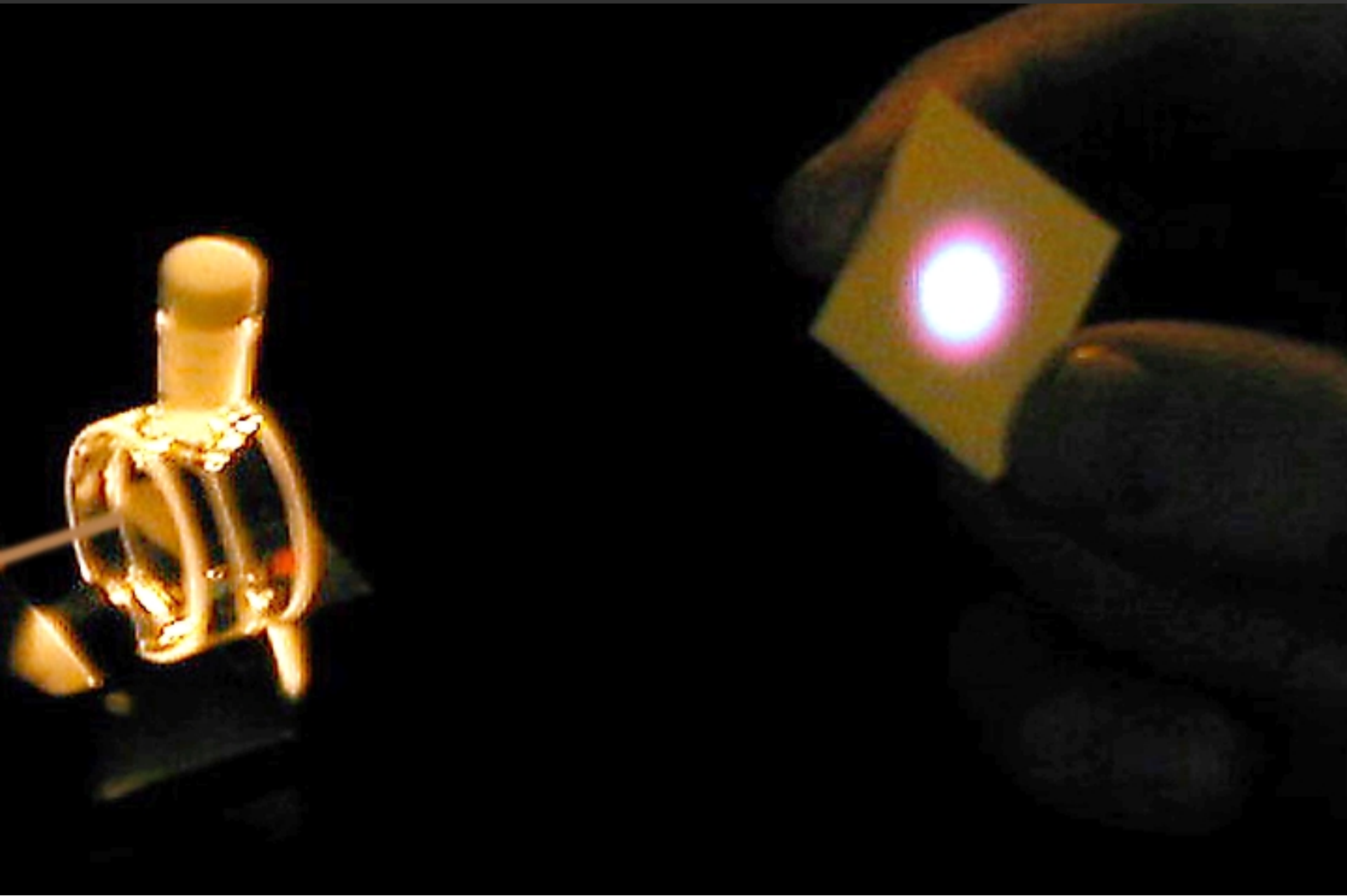


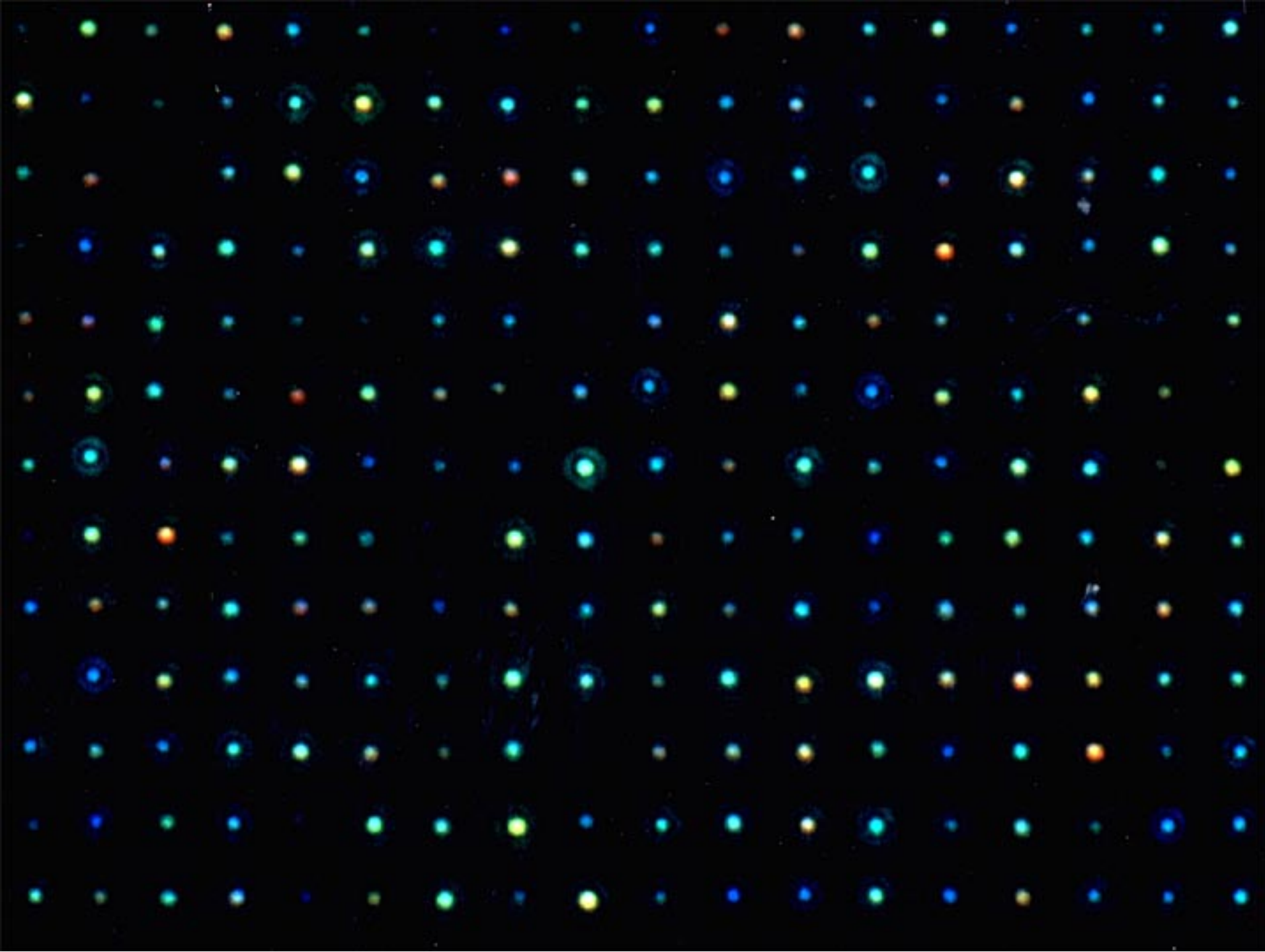
Introduction

“extremely” nonlinear response



Introduction





Microstructuring

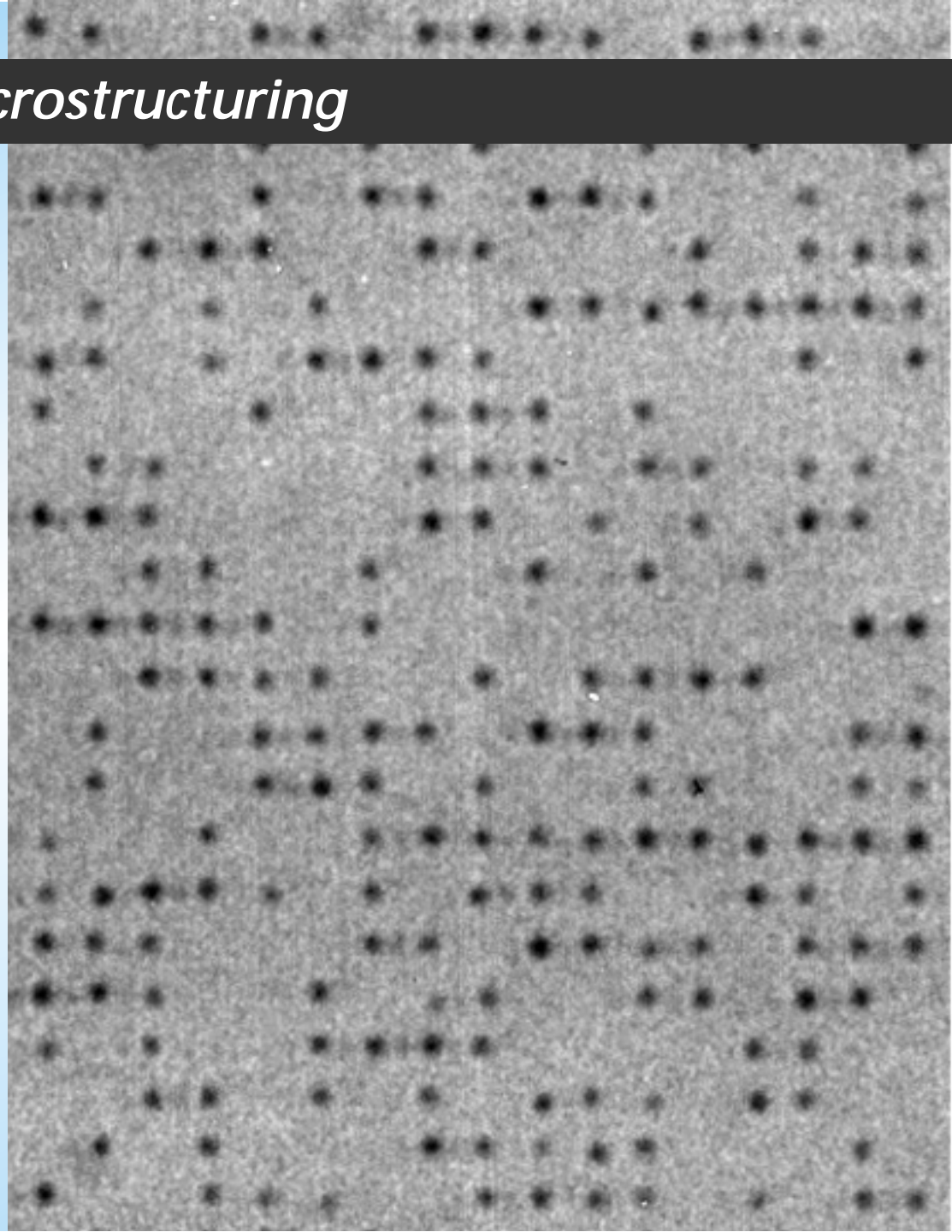
optical microscopy

2 x 2 μm array

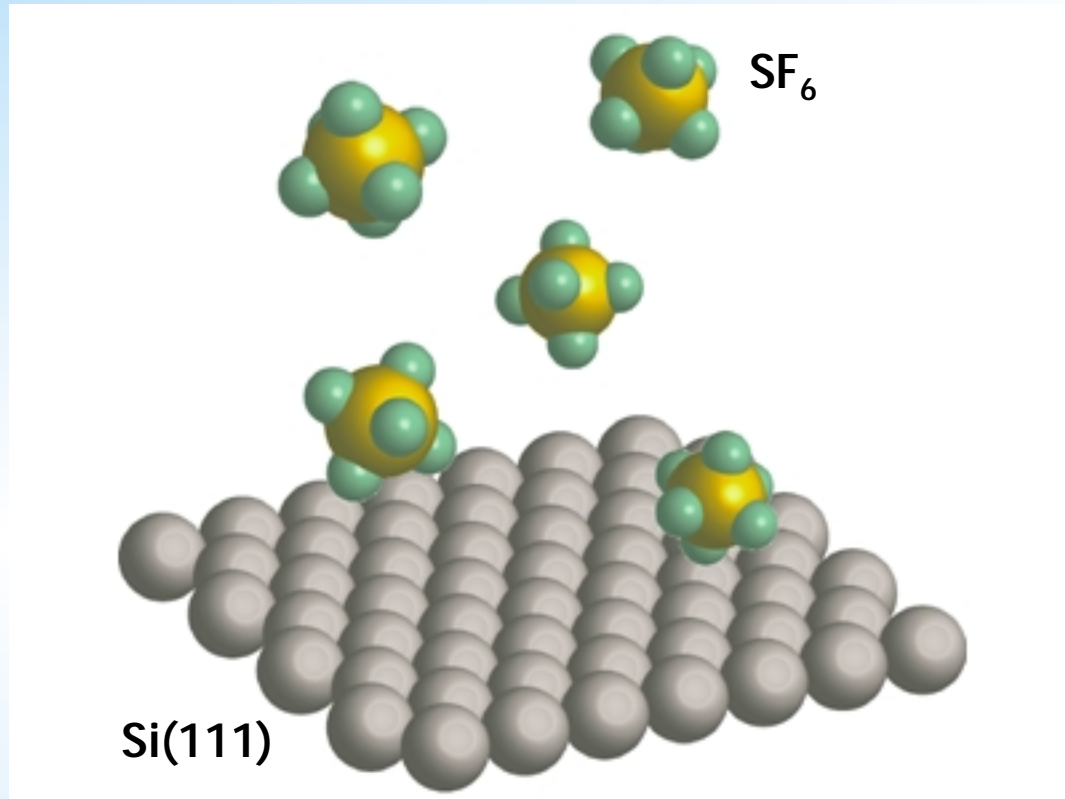
fused silica

0.5 μJ , 100 fs, 800 nm

Opt. Lett. 21, 2023 (1996)

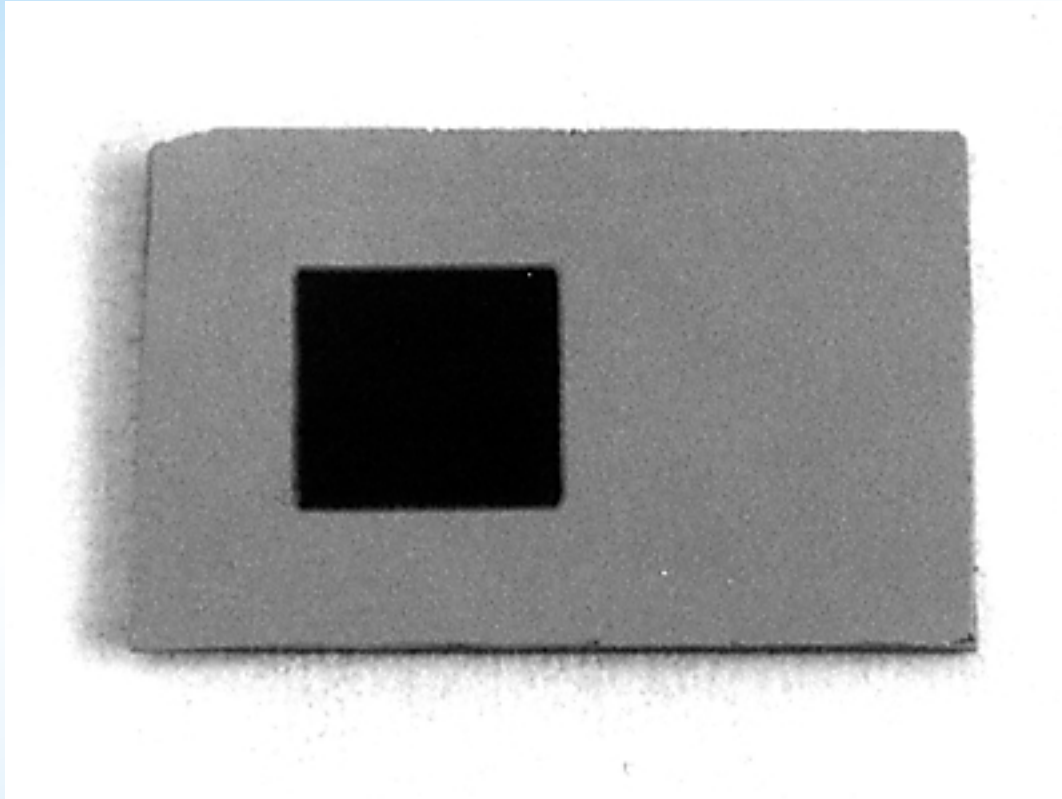


Microstructuring



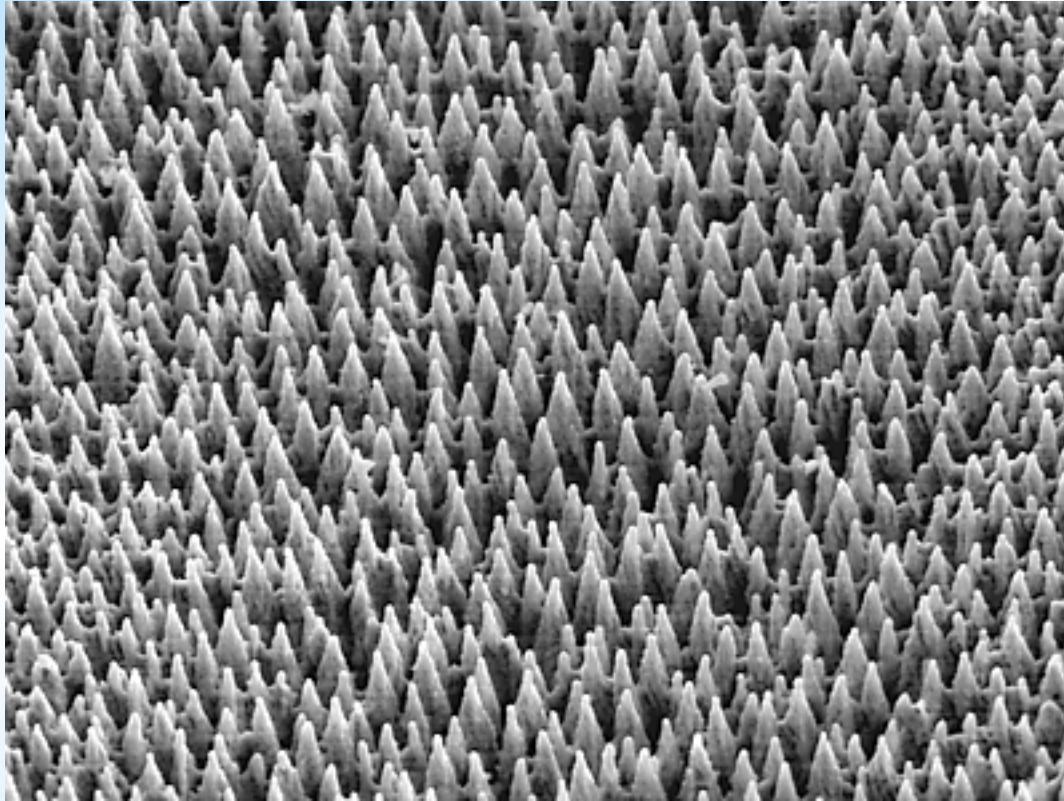
irradiate with 100 fs 10 kJ/m² laser pulses

Microstructuring



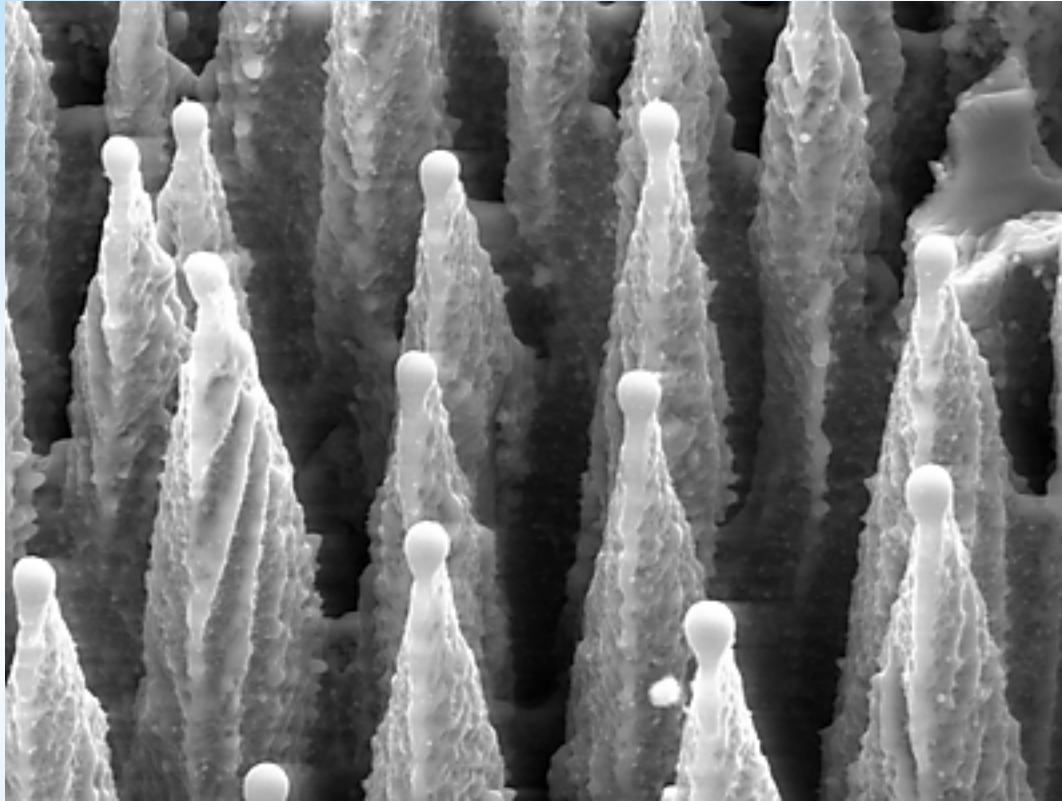
5 mm

Microstructuring



20 μm

Microstructuring



4 μm

Microstructuring

