



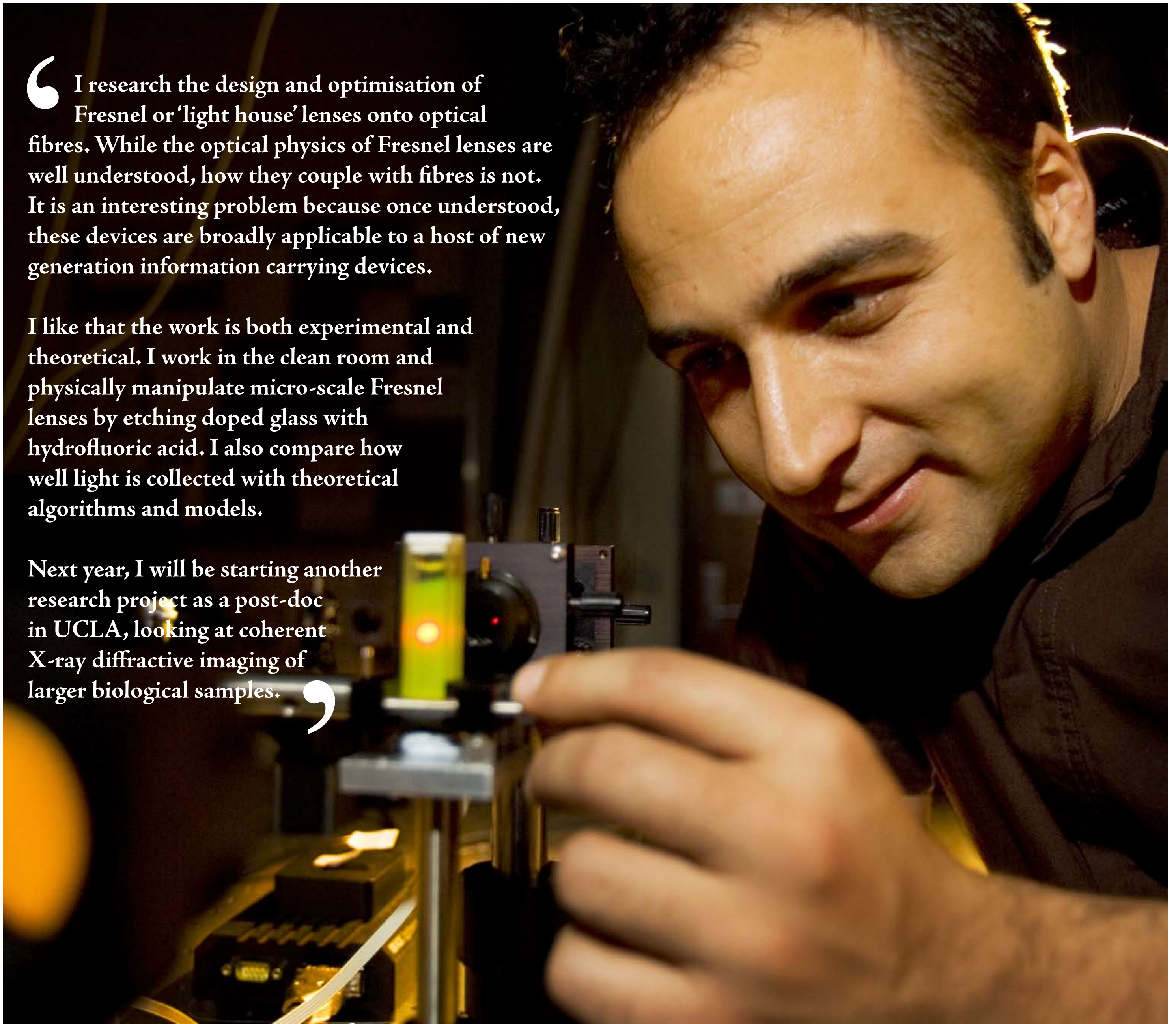
THE UNIVERSITY OF
MELBOURNE

Physics > Photonics

‘ I research the design and optimisation of Fresnel or ‘light house’ lenses onto optical fibres. While the optical physics of Fresnel lenses are well understood, how they couple with fibres is not. It is an interesting problem because once understood, these devices are broadly applicable to a host of new generation information carrying devices.

I like that the work is both experimental and theoretical. I work in the clean room and physically manipulate micro-scale Fresnel lenses by etching doped glass with hydrofluoric acid. I also compare how well light is collected with theoretical algorithms and models.

Next year, I will be starting another research project as a post-doc in UCLA, looking at coherent X-ray diffractive imaging of larger biological samples. ’



Adrian Mancuso

Post-doctoral Fellow in the MARC and Optics groups