PhD at the University of New South Wales, Sydney, Australia

We are looking for excellent students for THREE projects aiming to:

• Improve the quality of silicon wafers for their applications in advanced solar cell structures
• Investigate the interfaces between silicon and various dielectrics for both solar cells and quantum computing applications
• Develop new inspection methods for silicon and non-silicon photovoltaic devices

The School of Photovoltaic and Renewable Energy Engineering (SPREE) is one of the eight schools within the Faculty of Engineering at the University of New South Wales (UNSW), Sydney, Australia.

The school is widely considered as the best in the world. Building on its world-leading research, the school attracts leading international researchers in the area of photovoltaic. Our academic staff has been consistently ranked amongst the leaders worldwide in the photovoltaic field through international peer review. Our team has held the world record for silicon solar cell efficiencies for over twenty years and has been responsible for developing the most successfully commercialised photovoltaic technology internationally throughout the same period. The solar cell technology that is predicted to dominate the market in the next decade (the ‘PERC’) was invented and developed in our school.

The PhD will be done in our state-of-the-art laboratories, including our industrial production line (the only one in Australia) and our advanced fabrication and characterization facilities. Our laboratories allow most of the fabrication processes of semiconductors, including diffusion (phosphorous and boron), oxidation, chemical vapor deposition, laser-based etching and doping, photolithography, metal and semiconductor evaporation, metal plating, screen printing, etc.

Suitable students will be awarded a full scholarship for 3.5 years (PhD duration in Australia is 3-3.5 years). The scholarship fully covers the university fees and provides an additional allowance to cover living costs:
Tuition fees: $45,000 per year
Living allowance: $27,000 per year
Conference allowance: $3,000 per conference (to support attending a scientific international conference; at least two conferences during the PhD).

Requirements:
Undergraduate Degree: Bachelor’s degree in Electrical Engineering, Electronic, Physics, or Applied Science with a graduation GPA above 8 out of 10 or equivalent.

Master degree: Priority will be given for those who graduated from a Masters by research program, focusing on photovoltaic devices or similar.

Supervision will be done by Associate Professor Ziv Hameiri (ziv.hameiri@unsw.edu.au).