

It is wonderful to see all of you here this afternoon for the launch of IPAS.

For me, this day marks an important turning point.

Today, on Friday 13th of November, IPAS transforms from being just a great idea for bringing researchers together to being something with real substance and momentum.

IPAS offers its members the opportunity to extend the reach, impact and visibility of their research. It will do this by providing support to researchers across the board from administrative help and grant development to strategic planning and business development. It will do this by providing seed and leverage funding for pilot projects between disciplines or with industry partners, or for infrastructure enhancement. By providing state of the art facilities and the opportunities for researchers to develop new directions within this space. For external people looking in, IPAS offers a one-stop shop for engaging with the university in the photonics & sensing areas.

As many of you know, IPAS builds on the foundations established within the Centre of Expertise in Photonics, which was formed as part of a strategic alliance between the UoA and DSTO. Now, within IPAS, the CoEP will be joined by a new Centre of Expertise in Luminescence, ably directed by Nigel Spooner. In addition to these centres, IPAS contains a range of research programs and projects funded by a diverse range of sources.

Right now, the eastern end of the physics building is being transformed into a facility for research in silica optical fibres, which will allow us to advance our partnership with DSTO and strengthen our capabilities in the area of fibre lasers.

Thanks to support from the Federal and State Govts, the Uni and DSTO, we have secured \$34M to embark on a large building project to create a building for IPAS. This building will house a mix of research capabilities that has never been brought together anywhere else in the world. This includes over \$12M in research equipment, early \$2M of which has recently been awarded under the NCRIS/EIF Super Science scheme for 2 new facilities: a speciality fibre facility and a surface functionalisation facility. With support from the state govt and the university, we will be able to provide these facilities not only for IPAS researchers, but for the broader Australian research community.

The vision of IPAS is to nurture and harness excellence in disciplinary science, for the express purpose of pursuing a transdisciplinary agenda to create knowledge at the interfaces, and to answer 'big, real-world questions' at the boundaries of physics, chemistry and biology.

We aim to create disruptive new technologies for 4 areas: defence & national security, environmental monitoring, health and medical diagnostics and food and wine.

Imagine if in the future we could drive forward our fundamental understanding of biological systems or disease by having physicists, chemists and biologists working side by side to create new approaches to measurement rather than having to rely on being the first people to get their hands on a new commercial solution.

We are already doing exciting high-impact research. Just yesterday, our team made for the first time an optical fibre that is capable of generating coherent supercontinuum light in the mid-infrared. Today, the media is buzzing with the news that we have made the world's smallest holes within an optical fibre, just 30nm across, and that we are discovering fundamental new "extreme regime" physics as we push optical fibres towards the nanoscale.

We aim to create a vibrant, outcome-focussed outward-looking research culture that will provide a rich experience for students, career pathways for early career researchers and that welcomes collaboration.

As many of you will know, we are about to submit an expression of interest to the ARC to create a new Centre of Excellence we have called *Sensing the Small*. This is a partnership between 7 universities: UoA, ANU, UWA, Monash, Curtin, Macquarie and Melbourne, and I welcome many of the key collaborators in this bid here today. This bid is the perfect example of how the creation of IPAS can support the growth of research capacity.

I look forward to the next stage of this journey, to working with you to transform this dream into a reality.