

# Antimatter Matters Workshop Program

Wednesday, 9 November 2005

**8:30 Registration**

**9.00 – 9.20 Opening Remarks**

Prof. Jim Williams – Director, RSPHysSE, ANU  
Professor Lawrence Cram - Deputy Vice Chancellor, ANU  
Dr Terry Turney - Director of Nanotechnology, CSIRO

**9.20 - 10.30 SESSION 1**

**Chair: Steve Buckman (ANU)**

9.20 **Mike Charlton, University of Wales, Swansea** - “Positron Atomic Physics - the Road to Canberra”

9.55 **The Paulus Engineering Invited Lecture**

**Les Hulett, ORNL** – “Slow Positron Beams as Tools for Materials Characterization: A Brief History”

**10.30 Morning Tea**

**11.00 – 12.30 SESSION 2**

**Chair: Peter Teubner (Flinders University, Adelaide)**

11.00 **Cliff Surko, University of California, San Diego** - “Trap-based beams and positron-atomic physics – the long view”

11.45 **Steve Pas, University of Muenster and CSIRO** – “Exploring the Link Between Nanospace and Transport Properties in Materials”

12.15 **Jim Williams, University of Western Australia** – “Positron-Surface Interactions”

**12:30 Lunch University House Garden**

**14.00 – 15.45 SESSION 3**

**Chair: Terry Turney (CSIRO)**

2.00 **Andris Stelbovics Murdoch University** - “Positron and electron scattering theory ”

2.45 **Fiona Scholes, CSIRO** - “Corrosion Inhibition and the Role of Positron Beam and Non-Beam Characterisation of Coatings”

3.15 **Josefina Adebahr, Chalmers Uni and Monash Uni** - “Vacancy-Assisted Conductivity in Plastic Crystal Electrolytes”

**15.45 Afternoon tea**

**16.15 – 17.15 SESSION 4**

**Chair: Bob McEachran (ANU)**

4.15 **Terry Turney, CSIRO** – “Positron Characterization of Biological and Synthetic Materials at CSIRO”

4.45 **Marty Tant, Eastman Chemical Company** – “Free Volume Effects in Acrylic Latex Coatings”

**17.15 – 18.30 POSTERS**

**Thursday, 10 November 2005**

**8.30 – 10.30 SESSION 4**

**Chair: Igor Bray (Murdoch)**

- 9:00 **Tom Rescigno, Lawrence Berkeley National Laboratory** – “Positron-molecule scattering – the challenges”
- 9.45 **Suzanne Smith, ANSTO** – “Positrons for Imaging and Therapy”

**10.30 Morning tea**

**11.00 – 12.30 SESSION 5**

**Chair: Jim Williams (UWA)**

- 11.00 **TJ Paulus, Paulus Engineering** – “Positron systems in materials and bioscience”
- 11.30 **Anita Hill, CSIRO and Monash University** - “Characterization and Development of Nanostructured Materials Using Positrons”
- 12.00 **Tim Bastow, CSIRO and Monash University** – “NMR and Positron Characterization of Aluminium Alloys”

**12:30 Lunch University House Garden**

**2.30 – 3.45 SESSION 6**

**Chair: Anita Hill (CSIRO)**

- 2:30 **Cuong Nguyen, CSIRO** – “Membrane Separations for Energy and Environment Applications – Membrane Design Using Positrons”
- 3.00 **Masayuki Hasegawa, Tohoku University** – “Positron Annihilation Studies of Alloys: Self-Searching Embedded Nano-Particles and Nanovoids”

**3:45 Afternoon tea**

**4.15 – 5.15 SESSION 7**

**Chair: Julian Lower (ANU)**

- 4.15 **Bob McEachran, ANU** – “Positron Excitation Processes – Two Golden Ages”
- 4.45 **Jim Williams, ANU** – “Positron Beam Experiments on Vacancies, Voids and Nanocavities in Silicon”
- 5.00 **Lou Vance, ANSTO** – “Vacancy Defects in Perovskites”

**6.30 for 7.15 Conference Dinner**  
**Vivaldi Restaurant, ANU**

**Friday, 11 November 2005**

**9.00 – 10.30 SESSION 8**

**Chair: James Sullivan (ANU)**

9:00 **Mike Charlton, University of Wales, Swansea** – “Positron Accumulation - Applications in Fundamental Physics”

9:45 **Rod Greaves, First Point Scientific Inc.** – “Advances in Positron Traps”

**10:30 Coffee**

**11.00 – 12.30 SESSION 9**

**Chair: Steve Pas (Uni Muenster and CSIRO)**

11:00 **Frank Caruso, Melbourne University** – “Layer by Layer Materials – Structure and Applications”

11:30 **Alisher Kadyrov, Murdoch University** – “Positronium formation”

12:00 **Calum Drummond, CSIRO** - “Hierarchical materials by self assembly”

**12.30 Lunch University House Garden**

**14.00 – 1500 SESSION 10**

**Chair: Cliff Surko (UCSD)**

14:00 **James Sullivan, ANU** – “The Australian Positron Beamline Facility”

14:30 **Steve Buckman, ANU** – “AMO and Biophysics program at the APBF”

**15:00 Workshop Close**