

# DEPARTMENT OF MATERIALS

## DIVISION OF MATHEMATICAL, PHYSICAL AND LIFE SCIENCES

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### LECTURE LIST FOR HILARY TERM 2026

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Lectures begin on the first possible day after the beginning of Full Term unless otherwise stated.

**Unless otherwise indicated, all lectures begin on the hour and finish at five minutes before the next hour.**

**No food or drink (except bottled water) is permitted in the lecture theatres.**

### Timetable for Materials Science

Key to Teaching Venue Abbreviations:

|         |                                                     |
|---------|-----------------------------------------------------|
| HRLT    | Hume-Rothery Lecture Theatre, Hume-Rothery Building |
| BRLT    | Banbury Road Lecture Theatre, 21 Banbury Road       |
| LR3     | Lecture Room 3, Thom Building (Eng Sci)             |
| LR8 IEB | Lecture Room 8, Information Engineering Building    |
| ETBCR   | ETB Committee Room, Engineering Technology Building |
| BRCR    | Banbury Road Conference Room, 21 Banbury Road       |
| PRMR    | Parks Road Meeting Room, 12/13 Parks Road           |
| HRMR    | Hume-Rothery Meeting Room, Hume-Rothery Building    |
| HBTL    | Holder Building Teaching Labs, Holder Building      |
| HRF     | Hume-Rothery Foyer, Hume-Rothery Building           |
| RR      | Rex Richards Room 40.08, Rex Richards Building      |

| <b>Subject</b>                                                               | <b>Lecturer</b>                               | <b>Time</b>                                                                                | <b>Place</b>                   |
|------------------------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------|
| <b>FIRST YEAR</b>                                                            |                                               |                                                                                            |                                |
| Practical Class Meeting                                                      | Prof.R.S. Bonilla                             | M. 10 (wk 1)                                                                               | HRLT                           |
| Practical Classes                                                            | Various staff                                 | Th. F. 2-5 (wks 1-8)                                                                       | HBTL                           |
| Computing for Materials Science                                              | Prof. J.R. Yates & Dr. Z Goodwin              | T. 9-12 (wks 2-3)                                                                          | RR/ 21 BR CR                   |
| Engineering Drawing Classes                                                  | Ms B. Hughes                                  | F. 2-5<br>Group B wks 1&3,<br>Group A wks 2&4)                                             | Engineering Design Office, ETB |
| Crystallography Classes                                                      | Prof. R. Nicholls Dr A. Mostaed & Dr. J. Zhou | T. 9-12 (wks 4,6,8)                                                                        | LR3 Thom Bldg                  |
| Looking to the Future: Career Planning                                       | Dr A. Evans (OUCaS)                           | tbc                                                                                        | HRLT                           |
| Prelims Examination Briefing                                                 | Prof. T.J. Marrow                             | W. 10 (wk 8)                                                                               | HRLT                           |
|                                                                              |                                               |                                                                                            |                                |
| <b>Materials Science 1: Physical Foundations of Materials</b>                |                                               |                                                                                            |                                |
| Electromagnetic Properties and Devices                                       | Prof. S.C. Speller & Dr. T. Mitchell          | M. W. Th. F. 11 (wk 1)<br>M. Th. F. 11 (wk 2)<br>M. Th. F. 11 (wk 3)<br>W. 9, F. 11 (wk 4) | HRLT                           |
|                                                                              |                                               |                                                                                            |                                |
| Random Processes & Statistical Physics                                       | Dr T Nimmo                                    | M. W. Th. 11 (wks 4,6)<br>Th. F.11(wk 5)                                                   | HRLT                           |
| Wave Mechanics, Quantum Theory and Bonding                                   | Prof. R.J. Nicholls & Dr F. Fedele            | Th. F. 12 (wks 4,6)<br>Th. 12 (wk 7)<br>F. 12 (wk 7)<br>M. W. 12 (wk 8)                    | HRLT<br>BRLT<br>HRLT           |
|                                                                              |                                               |                                                                                            |                                |
| <b>Materials Science 2: Structure and Mechanical Properties of Materials</b> |                                               |                                                                                            |                                |
| Defects in Crystals                                                          | Prof. M.R. Castell                            | M. 9 (wks, 1)<br>W. Th. F. 12 (wks 1,3)<br>M. 12 (wk 3)                                    | HRLT                           |
| Structures of Crystalline and Glassy Materials                               | Prof. M.L. Galano                             | W. 12 (wk 4)<br>M. Th. 12 (wk 5)<br>M.12 (wk 6)                                            | HRLT                           |
|                                                                              |                                               |                                                                                            |                                |
| <b>Materials Science 3: Transforming Materials</b>                           |                                               |                                                                                            |                                |
| Electrochemistry                                                             | Prof. M. Pasta                                | M. W. Th. 9 (wks 6-7)<br>F. 9 (wk 6)<br>F. 9 (wk 7)                                        | HRLT<br>BRLT                   |
|                                                                              |                                               |                                                                                            |                                |
| <b>Mathematics for Materials Science</b>                                     |                                               |                                                                                            |                                |
| Taylor Series and Limits                                                     | A. Moshtaghpour (RFI,RAL,)                    | W. Th. F. 9 (wk 1)                                                                         | HRLT                           |
| Integration & Complex Numbers                                                | Dr. K. Dey                                    | M. Th. F. 9 (wks 2-4)                                                                      | HRLT                           |
| Ordinary Differential Equations                                              | Dr. G. Alanis                                 | M. Th. F. 9 (wk 5)<br>W. 12 (wk 6)<br>M. W. 12 (wk 7)                                      | HRLT                           |
|                                                                              |                                               |                                                                                            |                                |
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| <b>Subject</b>                                                   | <b>Lecturer</b>                                                                     | <b>Time</b>                                                                                                    | <b>Place</b>                                  |
|------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| <b>SECOND YEAR</b>                                               |                                                                                     |                                                                                                                |                                               |
| <b>GP1: Lifecycle, Processing &amp; Engineering of Materials</b> |                                                                                     |                                                                                                                |                                               |
| Materials End-of-Life                                            | Prof. H.E. Assender & Prof. S. Lozano-Perez                                         | W, 10, Th. 10 ( <i>wks 1-4</i> )<br>F. 12 ( <i>wks 1-2</i> )<br>M. 11 ( <i>wks 3-4</i> )                       | BRLT                                          |
| <b>GP2: Electronic Properties of Materials</b>                   |                                                                                     |                                                                                                                |                                               |
| Semiconductor Materials and Devices                              | Prof. R.S. Bonilla                                                                  | Th. 12 ( <i>wks 4-7</i> )<br><br><i>6 online lectures for students to view at appropriate times.</i>           | BRLT<br>HRLT                                  |
| <b>GP3: Mechanical Properties of Materials</b>                   |                                                                                     |                                                                                                                |                                               |
| Plastic Deformation of Materials                                 | Dr E. Liotti                                                                        | T. W. 9 ( <i>wks 1-4</i> )<br>F. 9 ( <i>wks 1-2</i> )                                                          | BRLT                                          |
| Structural Failure of Materials                                  | Prof. D.E.J. Armstrong & Prof. T.J. Marrow                                          | M. 9 ( <i>wks 3-5</i> )<br>Th. F. 9 ( <i>wks 3-4</i> )<br>Th. 9 ( <i>wk 5</i> )                                | BRLT                                          |
| <b>GP4: Structure &amp; Thermodynamics of Materials</b>          |                                                                                     |                                                                                                                |                                               |
| Structural & Compositional Characterisation of Materials I       | Prof. S. Lozano-Perez & Prof. N. Grobert                                            | T. 9, W. 11, Th. 10 ( <i>wks 5-6</i> )<br>T. 9, W. 11 ( <i>wk 7</i> )                                          | BRLT<br>HRLT                                  |
| <b>Other Lectures</b>                                            |                                                                                     |                                                                                                                |                                               |
| Entrepreneurship/ Business Plan (Lecture)                        | Dr S.M. Wilkinson                                                                   | M. 9, F. 11 ( <i>wk 1</i> )<br>M. F. 11 ( <i>wk 2</i> )<br>F. 11 ( <i>wks 3,6-7</i> )<br>T. 11 ( <i>wk 8</i> ) | BRLT<br>BRLT<br>BRLT<br>BRLT                  |
| Entrepreneurship/ Business Plan (Project Clinic)                 | Dr S.M. Wilkinson                                                                   | ONLINE - F. 2-4 ( <i>wk 3</i> )<br>15 mins per group between 2pm and 4pm (to sign up in advance)               |                                               |
| Entrepreneurship/ Business Plan (Feedback Clinic)                | Dr S.M. Wilkinson                                                                   | ONLINE - F. 2-4 ( <i>wk 7</i> )<br>15 mins per group between 2pm and 4pm (to sign up in advance)               |                                               |
| Practical Class Meeting                                          | Prof. R.S. Bonilla                                                                  | M. 10:30 ( <i>wk 1</i> )                                                                                       | BRLT                                          |
| Industrial Visit                                                 | Prof R House                                                                        | tbc                                                                                                            | HRF                                           |
| Practical Classes                                                | Various staff                                                                       | M. T. W. 2-5 ( <i>wks 1-8</i> )                                                                                | HBTL                                          |
| Poster Competition                                               | Prof. T.J. Marrow & Prof. D.E.J. Armstrong                                          | F. 4-6 ( <i>wk 1</i> )                                                                                         | IEB Atrium                                    |
| <b>Supplementary Subjects</b>                                    |                                                                                     |                                                                                                                |                                               |
| History and Philosophy of Science: The Origins of Science        | Prof. R. Iliffe & Dr S. Allen                                                       | M. 12 ( <i>wks 1-8</i> )<br>See <a href="#">Canvas</a> for details                                             | tbc                                           |
| Quantum Chemistry                                                | Prof. D.E. Manolopoulos, Prof. S. R. Mackenzie, Prof. J.E. Mc Grady & Dr W. Barford | T. F. 11 ( <i>wks 1-7</i> )                                                                                    | Physical and Theoretical Chemistry Laboratory |
| <b>THIRD YEAR</b>                                                |                                                                                     |                                                                                                                |                                               |

| <b>Subject</b>                                                              | <b>Lecturer</b>                                                           | <b>Time</b>                                                                                             | <b>Place</b>                                              |
|-----------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| <sup>1</sup> Atomistic Modelling (two-week module)                          | Prof. J.R. Yates, Prof. R. Nicholls & Dr. B. Mahmoud                      | M-F. 9-5 (wks 1-2)                                                                                      | RR                                                        |
| <sup>1</sup> Advanced Characterisation of Materials (two-week module)       | Prof. A.J. Wilkinson, Prof. M.L. Galano, Prof. N. Grobert & others        | M-F. 9-5 (wks 1-2)                                                                                      | Lectures (HRLT?)<br>–<br>Practical work – location varied |
| See timetable issued by module organisers for precise details and locations |                                                                           |                                                                                                         |                                                           |
| <b>Hilary Term Options (OP2) Lectures</b>                                   |                                                                           |                                                                                                         |                                                           |
| Advanced Polymers                                                           | Dr M. Forghani                                                            | T. 11 (wks 3-7)<br>Th. 12 (wk 3)<br>F. 10 (wks 3-6)<br>W. 9 (wk 5)<br>Th. 11 (wk 6)                     | LR8                                                       |
| Quantum Technology                                                          | Prof. J.M. Smith                                                          | Th. 12 (wks 4-7)<br>F. 9 (wks 4-5)<br>M. 12 (wk 5)<br>W. 10 (wks 6,8)<br>M. 11 (wk 7-8)<br>F. 10 (wk 7) | LR8                                                       |
| Enabling Nanotechnology: From Materials to Devices                          | Dr. N. Farmakidis                                                         | M. 12, W. 9 (wks 3-4,6)<br>T. 12 (wks 3, 6-7)<br>T. 10 (wk 4)<br>W. 12, Th. 9 (wk 7)                    | LR8                                                       |
| Materials for Nuclear Systems                                               | Prof. T.J. Marrow, Prof. D.E.J. Armstrong & Prof. S. Lozano-Perez         | W. 12 (wks 3-5)<br>Th. 10 (wks 3-4)<br>F. 9 (wks 3, 6-7)<br>T. 4 (wk 5)<br>M. 9 (wks 6-8)               | LR8                                                       |
| Energy Materials                                                            | Prof. M. Pasta, Prof. M.S. Islam, Dr G. Smith, Dr P. Cong & Dr C. Sherwin | M. 9, W. 10, F. 12 (wks 3-4)<br>M. 9, W. 10, Th. 11 (wk5)<br>W. F. 12 (wk 6)<br>M. 10 (wk 7)            | LR8                                                       |
| <b>Options Classes</b>                                                      |                                                                           |                                                                                                         |                                                           |
| <b>Michaelmas Term Options (OP1) Classes<sup>1</sup></b>                    |                                                                           |                                                                                                         |                                                           |
| <sup>1</sup> Materials & Devices for Optics & Optoelectronics               | Class Lecturer                                                            |                                                                                                         |                                                           |
| Class 1 (Workshop)                                                          | Dr. G. Hughes                                                             | M. 11-1 (wk 2)                                                                                          | BRLT                                                      |
| Class 2                                                                     | Dr. G. Hughes                                                             | T. 10, W. 10, Th. 2 (wk 2)                                                                              | ETBCR                                                     |
| Class 3                                                                     | Dr. G. Hughes                                                             | W. 2, Th. 2, F. 2 (wk 3)                                                                                | ETBCR                                                     |
| <sup>1</sup> Magnetic and Superconducting Materials                         | Class Lecturer                                                            |                                                                                                         |                                                           |
| Class 2                                                                     | Prof. S.C. Speller & Dr M. Slota                                          | M. 2, F. 2 (wk 2)<br>W. 3 (wk 2)                                                                        | ETBCR<br>BRRCR                                            |
| Biomaterials                                                                | Class Lecturer                                                            |                                                                                                         |                                                           |
| Class 3                                                                     | Prof. S.C. Speller & Dr M. Slota                                          | tbc (wk 2 HT)                                                                                           |                                                           |
|                                                                             |                                                                           |                                                                                                         |                                                           |
|                                                                             |                                                                           |                                                                                                         |                                                           |

| <b>Subject</b>                                                               | <b>Lecturer</b>                                                  | <b>Time</b>                       | <b>Place</b>  |
|------------------------------------------------------------------------------|------------------------------------------------------------------|-----------------------------------|---------------|
| <sup>1</sup> Microstructural Control in Engineering Alloys                   | Class Lecturer                                                   |                                   |               |
| Class 2                                                                      | Prof. K.A.Q. O'Reilly & Dr E. Liotti                             | M. 4, T. 10, Th. 9 (wk 2)         | BRCR          |
|                                                                              |                                                                  |                                   |               |
| <b>Hilary Term Options (OP2) Classes <sup>1</sup></b>                        |                                                                  |                                   |               |
| <sup>1</sup> Advanced Polymers                                               | Class Lecturer                                                   |                                   |               |
| Class 1                                                                      | Dr M. Forghani                                                   | M. 4, T. 2, Th. 4 (wk 6)          | ETBCR         |
| Class 2                                                                      | Dr M. Forghani                                                   | T. 2, Th. 4, F. 2 (wk 7)          | ETBCR         |
| Class 3                                                                      | Dr M. Forghani                                                   | Th. 9, Th. 4, F. 2 (wk 8)         | ETBCR         |
|                                                                              |                                                                  |                                   |               |
| <sup>1</sup> Quantum Technology                                              | Class Lecturer                                                   |                                   |               |
| Class 1                                                                      | Prof. J.M. Smith                                                 | W. 4, Th. 4, F. 2 (wk 7)          | BRCR          |
| Class 2                                                                      | Prof. J.M. Smith                                                 | T. 2 (wk 8)<br>Th. 2, F. 4 (wk 8) | ETBCR<br>BRCR |
| Class 3                                                                      | Prof. J.M. Smith                                                 | tbc (TT wk1)                      | tbc           |
|                                                                              |                                                                  |                                   |               |
| <sup>1</sup> Enabling Nanotechnology: From Materials to Devices              | Class Lecturer                                                   |                                   |               |
| Class 1                                                                      | Dr. N. Farmakidis                                                | M. 2-5 (wk 7)                     | ETBCR         |
| Class 2                                                                      | Dr. N. Farmakidis                                                | tbc (TT wk1)                      | ETBCR         |
|                                                                              |                                                                  |                                   |               |
| <sup>1</sup> Materials for Nuclear Systems                                   | Class Lecturer                                                   |                                   |               |
| Class 1                                                                      | Prof. T.J. Marrow                                                | T. 4, Th. 2, F. 4 (wk 6)          | BRCR          |
| Class 2                                                                      | Prof. D.E.J. Armstrong                                           | tbc (wk 1 TT)                     | BRCR          |
| Class 3                                                                      | Prof. S. Lozano-Perez                                            | tbc (wk 1 TT)                     | tbc           |
|                                                                              |                                                                  |                                   |               |
| <sup>1</sup> Energy Materials                                                | Class Lecturer                                                   |                                   |               |
| Class 1                                                                      | Prof. M. Pasta                                                   | T. 4, Th. 2, F. 2 (wk 6)          | ETBCR         |
| Class 2                                                                      | Prof. M.S. Islam                                                 | W. 4, Th. 2, F. 4 (wk 7)          | ETBCR         |
| Class 3                                                                      | Dr P. Cong & Dr C. Sherwin                                       | T. 9, W. 11, Th. 2 (wk 8)         | ETBCR         |
|                                                                              |                                                                  |                                   |               |
| <b>Other Lectures</b>                                                        |                                                                  |                                   |               |
| Part II Open Day                                                             | Prof. T.J. Marrow & Prof. P. Nellist                             | W. 2-5 (wk 6)                     | BRLT          |
| DPhil Poster Competition                                                     | Prof. A Wilkinson                                                | W. 4.30-6.30 (wk 6)               | IEB Atrium    |
|                                                                              |                                                                  |                                   |               |
| FHS Examination Briefing                                                     | Prof. T.J. Marrow                                                | F. 11 (wk 8)                      | HRLT          |
| Industrial Visit                                                             | Prof. R. House                                                   | tbc                               | HRF           |
|                                                                              |                                                                  |                                   |               |
|                                                                              |                                                                  |                                   |               |
|                                                                              |                                                                  |                                   |               |
| <b>FOURTH YEAR</b>                                                           |                                                                  |                                   |               |
|                                                                              |                                                                  |                                   |               |
| <b>Other Lectures</b>                                                        |                                                                  |                                   |               |
| <sup>1</sup> Writing Skills, Plagiarism, Laboratory Notebooks, IPR & Patents | Prof. H.E. Assender & Dr P.J. Warren                             | F. 2-5 (wk 3)                     | HRLT          |
| Ethics & sustainability Workshop                                             | Prof. L. Brimacombe & Dr S. Job (coordinated by Mr S.P. Newbury) | T. 9.30-5, W. 9.30-3.30 (wk 6)    | HRMR          |

| <b>Subject</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Lecturer</b>                                | <b>Time</b>                                                | <b>Place</b> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------------------|--------------|
| Presentation Skills:<br>PowerPoint, Modern A/V<br>Technology, PPT for Posters                                                                                                                                                                                                                                                                                                                                                                                                                                                             | tbc                                            | M. T. 1.30-4.30 ( <i>wk 2</i> )                            | IT Services  |
| Practical Tips on Delivering<br>a Research Talk (recording)                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Dr A.O. Taylor                                 | M. 3.30 ( <i>wk 5</i> )                                    | Online       |
| DPhil Poster Competition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Prof. A. Wilkinson                             | W. 4.30-6.30 ( <i>wk 6</i> )                               | IEB Atrium   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                |                                                            |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                |                                                            |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                |                                                            |              |
| <b>POSTGRADUATES</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                |                                                            |              |
| <p><b>Please see the Researcher Training area on the MPLS website:</b><br/> <a href="https://www.mpls.ox.ac.uk/training/pgr/PGR">https://www.mpls.ox.ac.uk/training/pgr/PGR</a></p> <p><b>and the Bodleian Libraries iSkills Workshops:</b><br/> <a href="https://www.bodleian.ox.ac.uk/ask/workshops#/">https://www.bodleian.ox.ac.uk/ask/workshops#/</a></p> <p><b>and the Explore Digital Skill at Oxford pages of IT Services:</b><br/> <a href="https://skills.it.ox.ac.uk/whats-on#/">https://skills.it.ox.ac.uk/whats-on#/</a></p> |                                                |                                                            |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                |                                                            |              |
| <b>Postgraduate training</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                |                                                            |              |
| Poster Competition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Prof. A. Wilkinson                             | W. 4.30-6.30 ( <i>wk 6</i> )                               | IEB Atrium   |
| 2 <sup>nd</sup> Year DPhil Talks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Prof. A. Wilkinson + <b>All Academic Staff</b> | M.T. W. Th. 10-6 ( <i>wk 7</i> )<br>F 10-6 ( <i>WK 7</i> ) | BRLT<br>HRLT |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                |                                                            |              |
| <b>Postgraduate lecture courses</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                |                                                            |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                |                                                            |              |
| <b>Research colloquia</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                |                                                            |              |
| Materials Colloquia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Various                                        | Th. 3:30-5pm ( <i>wks 1,3,5,8</i> )                        | HRLT         |
| Modelling Seminars                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Various                                        | T. 2 ( <i>wk 6</i> ) Others tbc                            | HRLT         |

<sup>1</sup> Students attend one class in each set and need to register for a specific class – details on how to do this are in the Option Course Synopsis and on Canvas.

## UNDERGRADUATE TEACHING LAB PRACTICAL SCHEDULES FOR HILARY TERM 2026

Senior Demonstrators and their Deputies are reminded that they are required to be in the Department on the days their practicals are scheduled

| HT Wk  | YEAR 1 (Thur, Fri)                                         |
|--------|------------------------------------------------------------|
| 1<br>2 | 1P5, Bubble Raft ( <b>JMS</b> , SCB)                       |
| 3<br>4 | 1P6, Thermal Analysis ( <b>KM</b> , KQOR)                  |
| 5<br>6 | 1P7, Polymers – Molecular Weight Effects ( <b>YS</b> , MP) |
| 7<br>8 | 1P8, Electrode Potentials ( <b>NG</b> , JMS)               |

| HT Wk  | YEAR 2 (Mon, Tue, Wed)                                     |
|--------|------------------------------------------------------------|
| 1<br>2 | 2P5, Mechanical Properties of Polymers ( <b>APT</b> , HEA) |
| 3<br>4 | 2P6, Dislocations & Plasticity ( <b>EL</b> , TJM)          |
| 5<br>6 | 2P7, Corrosion ( <b>C Barker</b> , SLP)                    |
| 7<br>8 | 2P8, Diffusion ( <b>RH</b> , TJM)                          |