

# Schedule by Category (1)

| Category<br>Section   | March 14 (Fri.)       |                        | March 15 (Sat.)       |                        | March 16 (Sun.)       |                       | March 17 (Mon.)       |  |
|---|-----------------------|------------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|--|
|   | AM                    | PM                     | AM                    | PM                     | AM                    | PM                    | AM                    | PM   |
| <b>S Symposium</b>  |                       |                        |                       |                        |                       |                       |                       |  |
| NT1 Attention Job Seeking Students! You Can Drive Semiconductor Innovation - Shape the Future with Your Creativity  |                       |                        |                       | K103<br>13:30 ~ 16:00  |                       |                       |                       |  |
| NT2 How to overcome shortage of scientists in the field of science and engineering. - start thinking about the career path from 15 years old -  |                       |                        |                       |                        |                       | K201<br>13:30 ~ 17:30 |                       |  |
| T1 New technologies toward fault-tolerant quantum computers   |                       | K103<br>13:00 ~ 17:15  |                       |                        |                       |                       |                       |  |
| T2 Shaping the Future of Green Fabs: Toward Sustainable Manufacturing   |                       |                        |                       | K206<br>13:30 ~ 18:45  |                       |                       |                       |  |
| T3 State-of-the-art quantum science and technology using solid-state quantum bits   |                       |                        |                       | K207<br>13:30 ~ 17:45  |                       |                       |                       |  |
| T4 In the ocean, in the field and in the living bodies, assembling of advanced electric field sensing technology opens a new world  |                       |                        | K204<br>09:30 ~ 11:45 | K204<br>13:30 ~ 15:30  |                       |                       |                       |  |
| T5 Deployment of science and energy education activities for non-metropolitan areas   |                       |                        |                       | K205<br>13:00 ~ 15:30  |                       |                       |                       |  |
| T6 Collaboration of acoustics and applied physics   |                       |                        |                       |                        | K204<br>10:00 ~ 12:05 | K204<br>13:30 ~ 15:45 |                       |  |
| T7 Current Status and Future Prospects of Phosphor Development Using Compound Semiconductors  |                       | K201<br>13:00 ~ 17:30  |                       |                        |                       |                       |                       |  |
| T8 Development of plant RI imaging technology and its application in agriculture  |                       |                        |                       |                        |                       |                       |                       | K201<br>13:30 ~ 16:25                          |
| T9 Crossroads in Applied Physics: New trends in Glass and Laser Processing Technology   |                       |                        |                       | K201<br>13:30 ~ 17:10  |                       |                       |                       |  |
| T10 Frontiers of Optical Science and Innovative Photonics   |                       |                        |                       |                        |                       | K103<br>13:30 ~ 18:05 |                       |  |
| T11 The roles and prospects of synchrotron radiation in advanced materials science research   |                       |                        | K203<br>10:00 ~ 11:25 | K203<br>13:30 ~ 17:20  |                       |                       |                       |  |
| T12 Sensor/actuator functions and emergent order inspired by biological and organic molecular dynamics  |                       |                        |                       | K202<br>13:30 ~ 17:55  |                       |                       |                       |  |
| T13 Novel functional oxide materials, devices, techniques for next generation transistor channel application  |                       |                        |                       |                        |                       | K203<br>13:30 ~ 17:40 |                       |  |
| T14 Plasma-activated solutions and their applications   |                       |                        |                       | K102<br>13:30 ~ 17:40  |                       |                       |                       |  |
| T15 Atomic Layer Process (ALP) analysis and application technologies  |                       |                        |                       |                        | K202<br>09:30 ~ 12:00 | K202<br>13:30 ~ 17:15 |                       |  |
| T16 New developments in magnetism and spintronics with imaging techniques   |                       |                        |                       |                        |                       | K102<br>13:30 ~ 17:45 |                       |  |
| T17 New trend in high Tc superconductors ~ What material is beyond cuprate ? ~  |                       | K206<br>13:30 ~ 17:25  |                       |                        |                       |                       |                       |  |
| T18 Advanced measurement for organic semiconductor and Metal halide perovskite devices  | K204<br>09:00 ~ 12:00 | K204<br>13:30 ~ 16:15  |                       |                        |                       |                       |                       |  |
| T19 Cutting edge nanotechnology for bio-sensor & 2D materials -Realization of a pandemic-free society with graphene FET sensors capable of rapid detection of human infectious viruses- |                       | K205<br>13:30 ~ 17:15  |                       |                        |                       |                       |                       |  |
| T20 Current status and future prospects of organic electronics technology   |                       |                        |                       |                        |                       |                       | K204<br>10:15 ~ 12:00 | K204<br>13:30 ~ 15:45                          |
| T21 New Development of Multicomponent Luminescent Materials: From Chalcopyrite to Perovskite  |                       | K203<br>13:30 ~ 17:35  |                       |                        |                       |                       |                       |  |
| T22 Symposium on Research and Human-Capital Development Activities aimed at Creating Next-Generation Semiconductors Industry  |                       | Y1311<br>14:00 ~ 15:30 |                       |                        |                       |                       |                       |  |
|   |                       | P10<br>16:00 ~ 18:00   |                       |                        |                       |                       |                       |  |
| T23 Core technologies of the semiconductor industry supporting the progress in IoT society. -Fusion & Diversification-  |                       | K101<br>13:30 ~ 16:40  |                       |                        |                       |                       |                       |  |
| T24 A la carte Packaging Technologies II: Advanced Semiconductor Packaging Technologies and Those   |                       |                        |                       | K101<br>13:30 ~ 17:30  |                       |                       |                       |  |
| T25 Extreme environment devices   |                       |                        |                       | Y1311<br>13:30 ~ 16:45 |                       |                       |                       |  |
| T26 Is it feasible to develop high-quality sensors utilizing ultrathin materials? ~Current status and challenges in molecular sensors based on nanotubes and two-dimensional materials~ |                       |                        |                       |                        |                       | K101<br>13:30 ~ 16:55 |                       |  |
| T27 Frontiers in Low-Power Semiconductor Technologies: Paving the Way for Carbon Neutrality   |                       |                        |                       |                        |                       | K205<br>13:00 ~ 17:30 |                       |  |
| T28 Frontiers in Nanoscale Heat Transport Phenomena and Control   |                       |                        |                       |                        |                       |                       | K205<br>10:00 ~ 11:35 | K205<br>13:00 ~ 15:05                          |
| T29 Developments in materials databases: Accumulating, extracting, and overlooking knowledge  |                       | K102<br>13:30 ~ 16:50  |                       |                        |                       |                       |                       |  |
| <b>FS Focused Session "AI Electronics"</b>  |                       |                        |                       |                        |                       |                       |                       |  |
| FS.1 Focused Session "AI Electronics"   |                       | P06<br>13:30 ~ 15:30   |                       |                        |                       | K306<br>09:00 ~ 12:00 | K306<br>13:30 ~ 16:30 | K306<br>09:00 ~ 12:00<br>K306<br>13:30 ~ 16:45 |
| <b>KS Sessions organized by JSAP's Professional Group</b>   |                       |                        |                       |                        |                       |                       |                       |  |
| KS.1 Solid State Quantum Sensor Group   |                       |                        |                       |                        |                       | K503<br>13:00 ~ 15:30 |                       |  |
|   |                       |                        |                       |                        |                       | P16<br>16:00 ~ 18:00  |                       |  |
| CS.4 Code-sharing Session of 6.2 & KS.1   |                       |                        |                       |                        |                       |                       | K502<br>09:00 ~ 11:30 | K502<br>13:00 ~ 15:15                          |
| KS.2 Quantum Information Engineering Group  | K103<br>09:00 ~ 11:15 |                        | K406<br>09:00 ~ 12:00 | K406<br>13:30 ~ 16:00  |                       | P16<br>16:00 ~ 18:00  |                       |  |
| KS.3 Green Transition of Fabrication Group  |                       |                        |                       |                        |                       | P16<br>16:00 ~ 18:00  |                       |  |

# Schedule by Category (2)

| Category<br>Section   | March 14 (Fri.)       |                       | March 15 (Sat.)       |                       | March 16 (Sun.)       |                       | March 17 (Mon.)       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|   | AM                    | PM                    | AM                    | PM                    | AM                    | PM                    | AM                    | PM                    |
| CS Code-sharing session   |                       |                       |                       |                       |                       |                       |                       |                       |
| CS.1 Code-sharing Session of 2.3 & 7.4  |                       |                       |                       |                       |                       | K507<br>13:00 ~ 17:30 |                       |                       |
| CS.2 Code-sharing Session of 3.10 & 3.13  |                       |                       |                       | K505<br>15:45 ~ 18:30 |                       |                       |                       |                       |
| CS.3 Code-sharing Session of 6.1 & 13.3 & 13.5  |                       | K503<br>13:00 ~ 17:45 |                       |                       |                       |                       |                       |                       |
| CS.4 Code-sharing Session of 6.2 & KS.1   |                       |                       |                       |                       |                       |                       | K502<br>09:00 ~ 11:30 | K502<br>13:00 ~ 15:15 |
| CS.5 Code-sharing Session of 6.5 & 7.5  | K507<br>09:00 ~ 11:30 | K507<br>13:00 ~ 18:00 |                       |                       |                       |                       |                       |                       |
| CS.6 Tandem solar cell (Code-sharing Session of 12.5 & 13.9 & 16.3)                       |                       |                       |                       |                       |                       |                       | K405<br>09:00 ~ 11:45 |                       |
| CS.7 Code-sharing Session of 12.6 & 12.7  |                       |                       |                       |                       | K402<br>09:00 ~ 11:30 |                       |                       |                       |
| 1 Interdisciplinary Physics and Related Areas of Science and Technology                   |                       |                       |                       |                       |                       |                       |                       |                       |
| 1.1 Interdisciplinary and General Physics   | K205<br>10:15 ~ 12:00 | P07<br>16:00 ~ 18:00  |                       |                       |                       |                       |                       |                       |
| 1.2 Education   |                       | K310<br>12:30 ~ 15:30 |                       |                       |                       |                       |                       |                       |
| 1.3 Novel technologies and interdisciplinary engineering                                  |                       | P07<br>16:00 ~ 18:00  | K205<br>09:15 ~ 11:45 |                       |                       |                       |                       |                       |
| 1.4 Energy conversion, storage, resources and environment                                 | K209<br>09:00 ~ 12:00 | K209<br>13:30 ~ 15:15 |                       |                       |                       |                       |                       |                       |
| 1.5 Instrumentation, measurement and Metrology  |                       | P07<br>16:00 ~ 18:00  |                       |                       |                       |                       | K209<br>10:00 ~ 12:00 | K209<br>13:30 ~ 15:45 |
| 1.6 Ultrasonics   |                       |                       |                       | K210<br>13:30 ~ 16:45 |                       |                       |                       |                       |
| 2 Ionizing Radiation  |                       |                       |                       |                       |                       |                       |                       |                       |
| 2.1 Radiation physics, Material development and characteristic evaluation                 |                       |                       | K502<br>09:00 ~ 11:45 | K502<br>13:00 ~ 17:00 | K502<br>09:00 ~ 11:30 | K502<br>13:00 ~ 16:45 |                       |                       |
| 2.2 Radiation generators, Detector development, Measurement technology                    | P01<br>09:30 ~ 11:30  |                       |                       |                       |                       | K501<br>13:00 ~ 18:15 | K201<br>09:00 ~ 11:45 |                       |
| 2.3 Accelerator technology, Accelerator mass spectrometry and beam analysis               |                       |                       |                       |                       |                       |                       |                       |                       |
| CS.1 Code-sharing Session of 2.3 & 7.4  |                       |                       |                       |                       |                       | K507<br>13:00 ~ 17:30 |                       |                       |
| 2.4 Life Sciences, Medical applications, Space and Earth Environment, Radiation Education | P01<br>09:30 ~ 11:30  | K502<br>13:00 ~ 16:15 |                       |                       |                       |                       |                       |                       |
| 3 Optics and Photonics  |                       |                       |                       |                       |                       |                       |                       |                       |
| 3.1 Basic optics and frontier of optics   |                       | K305<br>13:30 ~ 17:30 | K305<br>09:00 ~ 12:15 | K305<br>13:30 ~ 17:15 | P01<br>09:30 ~ 11:30  |                       |                       |                       |
| 3.2 Information photonics and image engineering   |                       |                       | K508<br>09:00 ~ 11:15 | K508<br>13:00 ~ 18:15 | P02<br>09:30 ~ 11:30  |                       |                       |                       |
| 3.3 Biomedical optics   |                       |                       | K306<br>09:00 ~ 12:00 | K306<br>13:30 ~ 16:30 | P03<br>09:30 ~ 11:30  |                       |                       |                       |
| 3.4 Laser system and materials  | K309<br>09:00 ~ 11:45 | K309<br>13:30 ~ 17:45 |                       | P01<br>13:30 ~ 15:30  |                       |                       |                       |                       |
| 3.5 Ultrashort-pulse and high-intensity lasers  |                       | K308<br>13:30 ~ 16:30 | K308<br>10:00 ~ 11:45 | K308<br>13:30 ~ 15:50 | P04<br>09:30 ~ 11:30  |                       |                       |                       |
| 3.6 Laser processing  |                       |                       | P01<br>09:30 ~ 11:30  |                       | K506<br>09:00 ~ 11:45 | K506<br>13:00 ~ 18:30 | K506<br>09:00 ~ 12:00 |                       |
| 3.7 Optical measurement, instrumentation, and sensor                                      | K304<br>09:00 ~ 12:15 | K304<br>13:30 ~ 18:30 | K304<br>09:00 ~ 12:15 | P02<br>13:30 ~ 15:30  |                       |                       |                       |                       |
| 3.8 Terahertz technologies  |                       | K504<br>13:00 ~ 16:30 | K504<br>09:15 ~ 11:30 | K504<br>13:00 ~ 17:30 | P05<br>09:30 ~ 11:30  |                       |                       |                       |
| 3.9 Optical quantum physics and technologies  |                       |                       | K309<br>09:30 ~ 11:30 | K309<br>13:30 ~ 16:45 |                       |                       |                       |                       |
| 3.10 Photonic structures and phenomena  |                       | K505<br>13:30 ~ 17:30 | K505<br>09:30 ~ 11:45 | K505<br>13:15 ~ 15:30 | P06<br>09:30 ~ 11:30  |                       |                       |                       |
| CS.2 Code-sharing Session of 3.10 & 3.13  |                       |                       |                       | K505<br>15:45 ~ 18:30 |                       |                       |                       |                       |
| 3.11 Nanoscale optical science and near-field optics                                      | K506<br>09:00 ~ 11:45 | K506<br>13:15 ~ 18:00 | K506<br>09:00 ~ 11:45 | K506<br>13:15 ~ 18:30 | P07<br>09:30 ~ 11:30  | K508<br>13:00 ~ 14:45 |                       |                       |
| 3.12 Semiconductor optical devices  |                       |                       |                       |                       | P08<br>09:30 ~ 11:30  | K309<br>13:30 ~ 16:15 | K309<br>10:00 ~ 12:30 |                       |
| 3.13 Silicon photonics, Photonics-electronics convergence, Optical control                |                       |                       |                       | P03<br>13:30 ~ 15:30  | K305<br>09:00 ~ 11:15 | K305<br>13:30 ~ 18:00 | K305<br>09:00 ~ 11:30 | K305<br>13:30 ~ 17:00 |
| CS.2 Code-sharing Session of 3.10 & 3.13  |                       |                       |                       | K505<br>15:45 ~ 18:30 |                       |                       |                       |                       |
| 3.14 Optics and Photonics English Session   |                       | K508<br>13:00 ~ 16:15 |                       | P04<br>13:30 ~ 15:30  |                       |                       |                       |                       |
| 6 Thin Films and Surfaces   |                       |                       |                       |                       |                       |                       |                       |                       |
| 6.1 Ferroelectric thin films  |                       |                       | K503<br>09:00 ~ 11:15 | K503<br>13:00 ~ 17:00 |                       | P08<br>16:00 ~ 18:00  |                       |                       |
| CS.3 Code-sharing Session of 6.1 & 13.3 & 13.5  |                       | K503<br>13:00 ~ 17:45 |                       |                       |                       |                       |                       |                       |
| 6.2 Carbon-based thin films   |                       | K403<br>13:00 ~ 16:45 |                       |                       | K403<br>09:30 ~ 11:15 | P09<br>16:00 ~ 18:00  |                       |                       |
| CS.4 Code-sharing Session of 6.2 & KS.1   |                       |                       |                       |                       |                       |                       | K502<br>09:00 ~ 11:30 | K502<br>13:00 ~ 15:15 |
| 6.3 Oxide electronics   | K502<br>09:30 ~ 11:45 | P01<br>13:30 ~ 15:30  |                       |                       | K203<br>09:00 ~ 11:45 |                       | K501<br>09:30 ~ 11:45 | K501<br>13:00 ~ 15:30 |
| 6.4 Thin films and New materials  |                       | P02<br>13:30 ~ 15:30  |                       |                       |                       | K504<br>13:00 ~ 17:00 | K504<br>09:30 ~ 11:00 |                       |
| 6.5 Surface Physics, Vacuum   |                       |                       |                       |                       |                       | P10<br>16:00 ~ 18:00  |                       |                       |
| CS.5 Code-sharing Session of 6.5 & 7.5  | K507<br>09:00 ~ 11:30 | K507<br>13:00 ~ 18:00 |                       |                       |                       |                       |                       |                       |
| 6.6 Probe Microscopy  |                       |                       |                       |                       | K504<br>10:00 ~ 11:30 | P11<br>16:00 ~ 18:00  | K503<br>10:00 ~ 11:30 | K503<br>13:00 ~ 16:30 |

# Schedule by Category (3)

| Category<br>Section   | March 14 (Fri.)       |                       | March 15 (Sat.)       |                       | March 16 (Sun.)       |                       | March 17 (Mon.)       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|   | AM                    | PM                    | AM                    | PM                    | AM                    | PM                    | AM                    | PM                    |
| <b>7 Beam Technology and Nanofabrication</b>  |                       |                       |                       |                       |                       |                       |                       |                       |
| 7.1 X-ray technologies  | P02<br>09:30 ~ 11:30  |                       |                       |                       |                       |                       | K507<br>09:00 ~ 10:45 |                       |
| 7.2 Applications and technologies of electron beams   |                       |                       | K507<br>09:00 ~ 11:15 | K507<br>13:00 ~ 15:15 |                       |                       |                       |                       |
| 7.3 Micro/Nano patterning and fabrication   |                       |                       |                       |                       |                       |                       |                       | K507<br>13:00 ~ 14:45 |
| 7.4 Ion beams   |                       |                       |                       |                       |                       |                       |                       |                       |
| CS.1 Code-sharing Session of 2.3 & 7.4  |                       |                       |                       |                       |                       | K507<br>13:00 ~ 17:30 |                       |                       |
| 7.5 Atomic/molecular beams and beam-related new technologies  | P02<br>09:30 ~ 11:30  |                       |                       |                       |                       |                       |                       |                       |
| CS.5 Code-sharing Session of 6.5 & 7.5  | K507<br>09:00 ~ 11:30 | K507<br>13:00 ~ 18:00 |                       |                       |                       |                       |                       |                       |
| <b>8 Plasma Electronics</b>   |                       |                       |                       |                       |                       |                       |                       |                       |
| 8.1 Plasma production and diagnostics   |                       |                       |                       |                       |                       | P01<br>13:30 ~ 15:30  | K303<br>09:00 ~ 12:00 | K303<br>13:30 ~ 16:00 |
| 8.2 Plasma deposition of thin film, plasma etching and surface treatment  |                       |                       |                       |                       |                       | P02<br>13:30 ~ 15:30  | K304<br>09:00 ~ 12:00 | K304<br>13:30 ~ 15:45 |
| 8.3 Plasma nanotechnology   | K201<br>09:00 ~ 10:30 |                       |                       |                       |                       | P03<br>13:30 ~ 15:30  |                       |                       |
| 8.4 Plasma life sciences  | P03<br>09:30 ~ 11:30  |                       |                       |                       | K303<br>09:00 ~ 11:45 | K303<br>13:30 ~ 16:00 |                       |                       |
| 8.5 Plasma phenomena, emerging area of plasmas and their new applications   | P04<br>09:30 ~ 11:30  |                       |                       |                       |                       | K304<br>13:30 ~ 17:15 |                       |                       |
| 8.6 Plasma Electronics English Session  |                       |                       |                       |                       |                       | K304<br>17:15 ~ 17:45 |                       |                       |
| 8.7 Plasma Electronics Invited Talk   |                       |                       | K102<br>10:30 ~ 11:45 |                       |                       |                       |                       |                       |
| <b>9 Applied Materials Science</b>  |                       |                       |                       |                       |                       |                       |                       |                       |
| 9.1 Dielectrics, ferroelectrics   |                       |                       |                       |                       |                       | K307<br>13:30 ~ 18:30 | P01<br>09:30 ~ 11:30  |                       |
| 9.2 Nanoparticles, Nanowires and Nanosheets   |                       |                       | K307<br>09:00 ~ 12:30 |                       |                       |                       |                       |                       |
| 9.3 Nanoelectronics   |                       |                       |                       |                       | K307<br>09:00 ~ 11:45 |                       |                       |                       |
| 9.4 Thermoelectric conversion   |                       |                       |                       | K307<br>13:30 ~ 17:30 | K309<br>10:00 ~ 11:15 |                       |                       |                       |
| 9.5 New functional materials and new phenomena  |                       |                       |                       |                       |                       |                       |                       | K307<br>13:00 ~ 17:00 |
| <b>10 Spintronics and Magnetics</b>   |                       |                       |                       |                       |                       |                       |                       |                       |
| 10.1 Emerging materials in spintronics and magnetics (including fabrication and characterization methodologies)                   | K302<br>10:30 ~ 11:45 |                       | K303<br>09:00 ~ 11:45 | K303<br>13:30 ~ 15:15 |                       |                       |                       |                       |
| 10.2 Fundamental and exploratory device technologies for spin   | K303<br>09:00 ~ 11:30 | K303<br>13:30 ~ 17:00 |                       | P07<br>16:00 ~ 18:00  |                       |                       |                       |                       |
| 10.3 Spin devices, magnetic memories and storages   |                       | K302<br>13:30 ~ 17:15 |                       |                       |                       |                       |                       |                       |
| 10.4 Spintronics in semiconductor, topological material, superconductor, and multiferroics  |                       |                       |                       |                       |                       |                       |                       | K102<br>13:30 ~ 16:45 |
| 10.5 Application of magnetic field  |                       |                       |                       |                       | K102<br>09:00 ~ 11:15 |                       |                       |                       |
| <b>11 Superconductivity</b>   |                       |                       |                       |                       |                       |                       |                       |                       |
| 11.1 Fundamental properties   | P05<br>09:30 ~ 11:30  |                       | K209<br>10:15 ~ 11:30 | K209<br>13:30 ~ 16:45 |                       |                       |                       |                       |
| 11.2 Thin and thick superconducting films, coated conductors and film crystal growth  |                       |                       |                       |                       |                       | K206<br>13:00 ~ 15:15 |                       |                       |
| 11.3 Critical Current, Superconducting Power Applications   |                       |                       |                       |                       |                       | K206<br>09:00 ~ 10:45 |                       |                       |
| 11.4 Analog applications and their related technologies   |                       |                       |                       |                       |                       | K209<br>13:30 ~ 18:00 |                       |                       |
| 11.5 Junction and circuit fabrication process, digital applications   |                       |                       |                       |                       |                       | K209<br>09:00 ~ 12:00 |                       |                       |
| <b>12 Organic Molecules and Bioelectronics</b>  |                       |                       |                       |                       |                       |                       |                       |                       |
| 12.1 Fabrications and Structure Controls  |                       | K406<br>13:00 ~ 17:15 |                       |                       |                       | P04<br>13:30 ~ 15:30  |                       |                       |
| 12.2 Characterization and Materials Physics   |                       | K404<br>13:30 ~ 18:00 | K404<br>09:00 ~ 12:15 | K404<br>13:45 ~ 18:45 |                       | P05<br>13:30 ~ 15:30  |                       |                       |
| 12.3 Functional Materials and Novel Devices   |                       |                       | P02<br>09:30 ~ 11:30  |                       | K406<br>09:00 ~ 11:30 | K406<br>13:00 ~ 17:45 | K406<br>09:00 ~ 11:30 | K406<br>13:00 ~ 15:15 |
| 12.4 Organic light-emitting devices and organic transistors   |                       |                       | P03<br>09:30 ~ 11:30  |                       |                       | K404<br>13:00 ~ 16:00 |                       | K404<br>13:00 ~ 16:30 |
| 12.5 Organic and hybrid solar cells   |                       | P08<br>16:00 ~ 18:00  | K405<br>09:00 ~ 12:00 | K405<br>13:00 ~ 17:15 | K405<br>09:00 ~ 11:30 | K405<br>13:00 ~ 17:00 |                       | K405<br>13:00 ~ 15:15 |
| CS.6 Tandem solar cell (Code-sharing Session of 12.5 & 13.9 & 16.3)   |                       |                       |                       |                       |                       |                       | K405<br>09:00 ~ 11:45 |                       |
| 12.6 Nanobiotechnology  |                       |                       | P04<br>09:30 ~ 11:30  |                       |                       | K402<br>13:00 ~ 17:15 | K402<br>09:00 ~ 11:30 | K402<br>13:00 ~ 16:00 |
| CS.7 Code-sharing Session of 12.6 & 12.7  |                       |                       |                       |                       | K402<br>09:00 ~ 11:30 |                       |                       |                       |
| 12.7 Biomedical Engineering and Biochips  |                       |                       | P05<br>09:30 ~ 11:30  | K403<br>14:30 ~ 18:45 |                       | K403<br>13:00 ~ 16:45 | K403<br>09:00 ~ 11:30 | K403<br>13:00 ~ 16:45 |
| CS.7 Code-sharing Session of 12.6 & 12.7  |                       |                       |                       |                       | K402<br>09:00 ~ 11:30 |                       |                       |                       |
| 12.8 Specific theme: Photoelectric Properties, Device Fabrication and Structural Controls of Organic-Inorganic Hybrid Perovskites |                       |                       | K402<br>09:00 ~ 11:15 | K402<br>13:00 ~ 15:30 |                       |                       | P02<br>09:30 ~ 11:30  |                       |

# Schedule by Category (4)

| Category<br>Section   | March 14 (Fri.)       |                       | March 15 (Sat.)       |   | March 16 (Sun.)        |                        | March 17 (Mon.)        |                        |
|---|-----------------------|-----------------------|-----------------------|---|------------------------|------------------------|------------------------|------------------------|
|   | AM                    | PM                    | AM                    | PM  | AM                     | PM                     | AM                     | PM                     |
| <b>13 Semiconductors</b>  |                       |                       |                       |   |                        |                        |                        |                        |
| 13.1 Fundamental properties, surface and interface, and simulations of Si related materials |                       |                       | K509<br>10:00 ~ 11:30 | K509<br>13:30 ~ 15:15<br>P08<br>16:00 ~ 18:00 |                        |                        |                        |                        |
| 13.2 Exploratory Materials, Physical Properties, Devices                                    | K210<br>09:00 ~ 11:30 | K210<br>13:30 ~ 16:00 |                       |   |                        | P12<br>16:00 ~ 18:00   |                        |                        |
| 13.3 Insulator technology   |                       |                       |                       |   |                        | P13<br>16:00 ~ 18:00   | K202<br>09:30 ~ 11:45  | K202<br>13:00 ~ 14:45  |
| CS.3 Code-sharing Session of 6.1 & 13.3 & 13.5  |                       | K503<br>13:00 ~ 17:45 |                       |   |                        |                        |                        |                        |
| 13.4 Si processing /Si based thin film / MEMS / Equipment technology                        |                       |                       |                       | P09<br>16:00 ~ 18:00                          | K103<br>09:00 ~ 11:45  |                        | K103<br>09:00 ~ 12:00  | K103<br>13:30 ~ 16:00  |
| 13.5 Semiconductor devices/ Interconnect/ Integration technologies                          | K101<br>09:00 ~ 12:15 |                       | K101<br>09:00 ~ 12:00 | P10<br>16:00 ~ 18:00                          | K508<br>09:00 ~ 12:00  |                        | K101<br>09:00 ~ 12:30  | K101<br>13:30 ~ 16:45  |
| CS.3 Code-sharing Session of 6.1 & 13.3 & 13.5  |                       | K503<br>13:00 ~ 17:45 |                       |   |                        |                        |                        |                        |
| 13.6 Nanostructures, quantum phenomena, and nano quantum devices                            |                       |                       |                       |   |                        | P14<br>16:00 ~ 18:00   | K302<br>10:00 ~ 11:30  | K302<br>13:30 ~ 16:00  |
| 13.7 Compound and power devices, process technology and characterization                    |                       | P03<br>13:30 ~ 15:30  | K403<br>09:00 ~ 12:45 |   | K301<br>09:00 ~ 12:30  | K301<br>14:00 ~ 17:30  | K301<br>09:00 ~ 11:45  | K301<br>13:15 ~ 17:00  |
| 13.8 Optical properties and light-emitting devices  |                       |                       |                       | P11<br>16:00 ~ 18:00                          | K302<br>10:00 ~ 11:30  | K302<br>13:30 ~ 15:00  |                        |                        |
| 13.9 Compound solar cells   |                       |                       | K302<br>09:00 ~ 12:00 | K302<br>13:30 ~ 16:30                         |                        | P15<br>16:00 ~ 18:00   |                        |                        |
| CS.6 Tandem solar cell (Code-sharing Session of 12.5 & 13.9 & 16.3)                         |                       |                       |                       |   |                        |                        | K405<br>09:00 ~ 11:45  |                        |
| <b>15 Crystal Engineering</b>   |                       |                       |                       |   |                        |                        |                        |                        |
| 15.1 Bulk crystal growth  |                       |                       |                       |   |                        |                        | K310<br>09:30 ~ 12:00  |                        |
| 15.2 II-VI and related compounds  |                       |                       |                       |   |                        | P06<br>13:30 ~ 15:30   |                        | K310<br>13:30 ~ 14:00  |
| 15.3 III-V-group epitaxial crystals, Fundamentals of epitaxy                                |                       | P04<br>13:30 ~ 15:30  |                       |   | K310<br>09:30 ~ 11:30  | K310<br>13:30 ~ 14:45  |                        |                        |
| 15.4 III-V-group nitride crystals   | K401<br>09:00 ~ 11:30 | K401<br>13:00 ~ 17:30 | K401<br>09:00 ~ 11:30 | K401<br>13:00 ~ 17:30                         | K401<br>09:00 ~ 11:30  | K401<br>13:00 ~ 17:30  | K401<br>09:00 ~ 12:00  |                        |
|   |                       | P05<br>13:30 ~ 15:30  |                       |   |                        |                        |                        |                        |
| 15.5 Group IV crystals and alloys   |                       |                       | K310<br>10:00 ~ 12:00 | K310<br>14:00 ~ 16:15                         |                        | P07<br>13:30 ~ 15:30   |                        |                        |
| 15.6 Group IV Compound Semiconductors (SiC)   |                       | K402<br>13:00 ~ 15:45 |                       |   |                        |                        |                        |                        |
| 15.7 Crystal characterization, impurities and crystal defects                               | K306<br>09:00 ~ 11:45 | K306<br>13:30 ~ 14:15 |                       |   |                        |                        |                        |                        |
|   |                       | P09<br>16:00 ~ 18:00  |                       |   |                        |                        |                        |                        |
| <b>16 Amorphous and Microcrystalline Materials</b>  |                       |                       |                       |   |                        |                        |                        |                        |
| 16.1 Fundamental properties, evaluation, process and devices in disordered materials        |                       |                       |                       |   |                        |                        | K308<br>09:30 ~ 11:30  | K308<br>13:30 ~ 16:45  |
| 16.2 Energy Harvesting  |                       |                       | P06<br>09:30 ~ 11:30  |   | K205<br>09:00 ~ 10:30  |                        |                        |                        |
| 16.3 Bulk, thin-film and other silicon-based solar cells                                    |                       |                       |                       |   | K308<br>09:00 ~ 11:30  | K308<br>13:30 ~ 17:15  |                        |                        |
| CS.6 Tandem solar cell (Code-sharing Session of 12.5 & 13.9 & 16.3)                         |                       |                       |                       |   |                        |                        | K405<br>09:00 ~ 11:45  |                        |
| <b>17 Nanocarbon and Two-Dimensional Materials</b>  |                       |                       |                       |   |                        |                        |                        |                        |
| 17.1 Carbon nanotubes & other nanocarbon materials  |                       | K207<br>13:30 ~ 19:00 |                       |   |                        |                        |                        |                        |
| 17.2 Graphene   |                       |                       | K207<br>09:00 ~ 12:00 | P05<br>13:30 ~ 15:30                          | K207<br>09:00 ~ 11:45  |                        |                        |                        |
| 17.3 Layered materials  |                       | K301<br>13:30 ~ 18:15 | K301<br>09:00 ~ 12:00 |   | K101<br>09:00 ~ 12:00  |                        | K102<br>09:30 ~ 11:45  |                        |
|   |                       |                       |                       | K301<br>15:45 ~ 19:00                         |                        |                        |                        |                        |
| <b>21 Joint Session K "Wide bandgap oxide semiconductor materials and devices"</b>          |                       |                       |                       |   |                        |                        |                        |                        |
| 21.1 Joint Session K "Wide bandgap oxide semiconductor materials and devices"               |                       |                       |                       | P12<br>16:00 ~ 18:00                          | Y1311<br>09:00 ~ 11:30 | Y1311<br>13:00 ~ 17:15 | Y1311<br>09:00 ~ 11:45 | Y1311<br>13:00 ~ 15:45 |
| <b>22 Joint Session M "Phonon Engineering"</b>  |                       |                       |                       |   |                        |                        |                        |                        |
| 22.1 Joint Session M "Phonon Engineering"   |                       |                       | K501<br>10:00 ~ 11:15 | K501<br>13:00 ~ 16:30                         | P09<br>09:30 ~ 11:30   |                        |                        |                        |
| <b>23 Joint Session N "Informatics"</b>   |                       |                       |                       |   |                        |                        |                        |                        |
| 23.1 Joint Session N "Informatics"  |                       |                       |                       | P06<br>13:30 ~ 15:30                          | K505<br>09:00 ~ 11:30  | K505<br>13:00 ~ 17:45  | K505<br>09:00 ~ 11:30  | K505<br>13:00 ~ 16:30  |