

LPM Topics

1. Fundamental aspects
(Dynamics, modeling, simulation, etc.)
2. Process monitoring and control
3. Laser and photochemistry
4. Nanotechnology
5. Laser-based direct-write techniques
6. Ultra-short pulse laser processing
7. VUV laser and X-ray processing
8. Surface treatment (Texturing, cleaning, annealing, modification, etc.)
9. Advanced laser processing
(Fiber laser, disc laser, FEL, etc.)
10. Micro-patterning and micro-structuring
11. Nano ripple formation
12. Micro-machining
13. 3-D micro- and nano-fabrication
14. Drilling and cutting
15. Micro-welding and micro-bonding
16. Micro-forming
17. Wafer dicing
18. Marking and trimming
19. Glass/Ceramic processing
20. Packaging and mounting process
21. Lithography
(including EUV source and application)
22. Manufacture of micro devices and systems
23. Film deposition and synthesis of advanced materials (PLD, CVD, etc.)
24. Nano- and micro-particles
25. Medical and biological applications
26. Optics and systems for laser microprocessing
27. Laser devices
28. Beam shaping
29. Industrial applications
30. Others
31. LPM Special Session (L1) TBA
32. LPM Special Session (L2) TBA
33. LPM Special Session (L3) TBA

HPL Topics

1. Fundamentals of laser-materials interactions
2. Laser-induced plasma/plume
3. Gas laser
4. Solid-state laser (YAG, Fiber, Disk, etc.)
5. Diode laser
6. Green or blue laser
7. Optics
8. Beam delivery system
9. Monitoring and control (including OCT)
10. Metallurgical and mechanical aspects
11. Modeling and simulation
12. Cleaning
13. Surface modification
(Hardening, quenching, alloying, etc.)
14. Cladding and rapid prototyping
15. Additive manufacturing (3D Printer)
16. Welding
17. Welding of thick plate
18. Welding of high strength steel
19. Welding of light metals and alloys
20. Joining of plastics, glasses or ceramics
21. Joining of dissimilar materials
(plastic to metal)
22. Joining of battery or fuel cell
23. Remote welding
24. Hybrid welding
25. Brazing and soldering
26. Drilling (High speed and high quality)
27. Cutting (of CFRP, etc.)
28. Thick plate cutting and dismantling
29. Industrial applications
30. Innovative applications
(Sandwich panel, etc.)
31. Present status and future prospects
32. Others

