

Projects

UIDB/00285/2020

2022



CEMMPRE

Centre for Mechanical Engineering,
Materials and Processes

Projects

1. @AM.PPT – Additive Manufacturing: *Pós/ Poros /Topografia da superfície & Comportamento Mecânico*. Ref. CENTRO-01-0145-FEDER-181239 (01/07/2022-30/06/2023).
2. 3D-2-4D - From 3D to 4D printing: Can bacterial cellulose make the bridge? Ref. POCI-01-0145-FEDER-030767 (15/07/2018-31/01/2022).
3. 3DCOMPOCER-Additive Manufacturing of Ceramic Matrix Composites for Mechanical Parts. Ref. POCI-01-0247-FEDER- 047060 (30/09/2020-30/06/2023).
4. 4DComposite-Intelligent molding of 4D components based on carbon-embedded shape memory alloys pre-impregnated with thermoplastic. Ref. POCI-01-0247-FEDER-033758 (01/09/2018-28/08/2022).
5. ACTIVESTENT - *Funcionalização Sustentável de Stents para Prevenção de Infecções do Trato Urinário*. Ref. CENTRO-01-0145-FEDER-181221 (01/07/2022-30/06/2023).
6. Add.Additive – Add Additive Manufacturing to Portuguese industry. Ref.POCI-01-0247-FEDER-024533. (01/04/2018-30/06/2022).
7. AddDies- Advanced Manufacturing Technologies for new dies generation. EUREKA SMART Ref.POCI-01-0247-FEDER-042536 (01/04/2019-31/12/2022).
8. ADDPOWDER - New filaments based on metallic powders for additive manufacturing. Ref. POCI-01-0247-FEDER-039910 (01/08/2019-31/01/2023).
9. ANIMATE: Advanced Numerical Modelling and Experimental Research on Turbulent and Transitional Flows with Applications to Chemical, Power, Automotive and Aeroengine Industries. (01/10/2019-30/10/2022).
- 10.ARTTE - Advanced Robotics/Tool Technology, and Eco-Efficiency. POCI-01-0247-FEDER-037457 (15/08/2018-14/02/2022).
- 11.BeirInov - *Sustentabilidade na cadeia de valor de produtos enchidos*. Ref. CENTRO-01-0247-FEDER-113492 (01/07/2021-30/06/2023).
- 12.Biopaint - *Tinta de base natural, energeticamente eficiente e com propriedades funcionais distintas direcionada ao setor automóvel*. POCI-01-0247-FEDER-072629 (01/03/2021-30/06/2023).
- 13.Biorecover- Development of an innovative sustainable strategy for selective biorecover of critical raw materials from Primary and Secondary sources. Ref. H2020-SC5-2018-2-821096 (01/06/2019-31/05/2023).
- 14.BioShoes4all - *Inovação e Capacitação da Fileira do Calçado para a Bioeconomia Sustentável* (01/09/2022-31/12/2025).
- 15.BioTack- Development of biobased tackifying agents for polyurethane reactive adhesives.* Ref: POCI-01-0247-FEDER-045292 (01/04/2020-01/10/2022).
- 16.CATARACTUS: Development of a medical device based on ultrasounds for objective cataract characterization and optimal phacoemulsification energy evaluation. Ref. POCI-01-0145-FEDER-028758 (26/07/2018-25/07/2022).

17. CIRCULAPLAS- Development of plastic films exclusively based on recycled materials. Ref: POCI-01-0247-FEDER-047739. (01/07/2020-30/06/2023).
18. CleanMould - *Solução avançada de baixo atrito e revestimento diamantado resistente ao atrito*. POCI-01-0247-FEDER-070290 (23/03/2021-30/06/2023).
19. CO2BIOFILTER Bio-Filter for Carbon Dioxide Capture and Valorization: A Sustainable Approach towards Environment, Health and Circular Economy. Ref. *Projetos Semente de Investigação 2022 UC* (01/05/2022-31/12/2022).
20. COBOTIS: Human-robot interaction for collaborative robotics. Ref. PTDC/EME-EME/32595/2017 (01/06/2018-31/05/2022).
21. *Colégio Doutoral de Tordesilhas* (20/02/2022-19/02/2024).
22. COMP4UAVs - Components for unmanned aerial vehicles (UAVs) produced by additive manufacturing. Ref. PTDC/EME-ESP/31296/2017. (26/07/2018- 25/07/2022).
23. CrackFree - Towards self-repairing metallic materials. Ref. POCI-01-0145-FEFER-029101 (16/07/2018-15/07/2022).
24. DERMOTRONICS - *Eletrónica Epidérmica e Vestível para Biomonitorização*. Ref. CENTRO-01-0145-FEDER-031784 (02/05/2018-01/05/2022).
25. Design and Synthesis of Novel High Entropy Alloy Coatings for Extreme Environments. (01/06/2021-31/05/2023).
26. DigitalTouchAuto - *Desenvolvimento de soluções avançadas e interactivas para painéis interiores de automóvel*. POCI-01-0247-FEDER-049263 (23/11/2020-25/05/2023).
27. DUST+ *Compósitos inovadores com incorporação de pó resultante das lamas do corte de pedra calcária*. Ref. POCI-01-0247-FEDER-47076 (01/01/2021-30/06/2023).
28. Easy Butter Spreader (INOVC+) (01/09/2022-30/06/2023).
29. EZ-SHEET - Easy-to-use strategy for the accurate material description in sheet metal forming. Ref. PTDC/EME-EME/31216/2017 (26/07/2018-25/07/2022).
30. FAMTIC - Improvements on the fatigue behavior of additive manufacturing titanium alloys components. Ref. PTDC/EME-EME/28789/2017 (22/06/2018- 21/06/2022).
31. Friction 4.0 - *Modelação e Controlo do Calor Gerado por Fricção*. Ref. PTDC/EME-APL/32089/2017 (26/07/2018-25/07/2022).
32. FuturePharma-Pharmaceutical supply chain of the future. Ref. PTDC/EME-SIS/6019/2020 (29/03/2021-28/03/2024).
33. Greenfil- *Produção de filamentos biodegradáveis*. Ref. POCI-01-0247-FEDER-033146 (15/09/2018-14/09/2022).
34. GreenPack- Development of new packaging with high incorporation of recycled PET and biodegradable polymers.* Ref: POCI-01-0247-FEDER-045282 (01/10/2020-01/01/2023).
35. GreenTribos, Marie Skłodowska-Curie grant agreement No. 860246 (01/01/2020-31/12/2023).
36. H2OforAll- Innovative Integrated Tools and Technologies to Protect and Treat Drinking Water from Disinfection Byproducts (DBPs). Grant agreement ID: 101081963 (01/11/2022-31/10/2025).

37. HardRings - Revestimentos duros de DLC (ta-C) para a próxima geração de anéis de pistões de motores de combustão interna. Ref. PTDC/EME-APL/29122/2017 (22/06/2018-21/06/2022).
38. High2RPaper- *Papel reciclado de elevada resistência com incorporação de pasta crua de rejeitos*. Ref. POCI-01-0249-FEDER-0044871 (01/01/2021-30/06/2023).
39. Highlight - *Novas soluções para moldes de injeção com ultra alto brilho*. Ref. POCI-01-0247-FEDER-047156 (30/06/2020-30/06/2023).
40. i9Logo - *Inovação no desenvolvimento e produção de Logotipos para o automóvel*. Ref. POCI-01-0247-FEDER-072607 (01/03/2021-30/06/2023).
41. ifDAMAGEelse: Modelling and numerical simulation of damage in metallic sheets: anisotropic behaviour and tension-compression asymmetry coupled approach for formability prediction. Ref. PTDC/EME-EME/30592/2017 (POCI-01-0145-FEDER-030592) (01/06/2018-31/05/2022).
42. Inject4Pain-New biomaterials and their applications in innovative injectable formulations for controlled drug release.* Ref. POCI-01-0247-FEDER-045201 (01/02/2020-19/02/2023).
43. Integradde: Intelligent data-driven pipeline for the manufacturing of certified metal parts through Direct Energy Deposition processes. Horizon 2020 Grant agreement ID: 820776 (01/10/2018-31/03/2023).
44. IOSHAD- Development of a new generation of metal and nitride thin films deposited by SF-DOMS by controlling and/or preventing the atomic shadowing effect. Ref. PTDC/CTM-REF/1464/2021 (01/01/2022-31/12/2024).
45. Joint European Master of Tribology of Surfaces ad Interfaces. Ref. 532535-1-SI-2012-1-ERA (01/09/2019-31/08/2024).
46. Ligações multimaterial com recurso a tecnologia aditiva. Ref. IPL/2021/MultiMat3D_ISEL (06/09/2021-05/03/2023)
47. LUBENERGY- Engineering Lubricious Interfaces for Enhancing Energy Efficiency. Ref. UTAP-EXPL/NPN/0046/2021 (21/02/2022-20/02/2023).
48. MCTOOL21 – Manufacturing of cutting tools for the 21st century: from nanoscale material design to numerical process simulation. Ref. POCI-01-0247-FEDER-045940 (01/04/2020-31/03/2023).
49. MicroMineR- Microbiological technologies in mining and recycling of high-tech critical metals. (26/07/2018-25/07/2022).
50. Microminer– Microbiological technologies in mining and recycling of high-tech critical metals. POCI-01-0145-FEDER-03182 (PTDC/CTA-AMB/31820/2017) (26/07/2018-25/07/2022).
51. NanoTiC - Nanojoining of Titanium to Ceramics. Ref. POCI-01-0145-FEFER-031579 (23/07/2018-28/02/2022).
52. On-Surf - Mobilizar competências tecnológicas em Engenharia de Superfícies. Ref. POCI-01-0247-FEDER-024521 (01/10/2018-30/09/2022).
53. Penelope: Closed-loop digital pipeline for a flexible and modular manufacturing of large components. Horizon 2020 Grant agreement ID: 958303 (01/10/2020-30/09/2024).

54. Polycel- Novel cellulose-based copolymers via controlled polymerization techniques. PTDC/CTM-CTM/29742/2017 (26/07/2018-27/07/2022).
55. Polyelectron - Large Volume Controlled Radical Polymerization Powered by Electricity. Ref. PTDC/EQU-EQU/2686/2020 (01/09/2021-31/08/2024).
56. POWERSKIN PLUS - Highly advanced modular integration of insulation, energising and storage systems for non-residential buildings. Grant agreement ID: 869898 (01/10/2019-31/03/2024).
57. PRODUTECH4S&C - PRODUTECH SUSTENTÁVEL & CIRCULAR - *Soluções inovadoras, sustentáveis e circulares com impacto na fileira das tecnologias de produção*. Ref. POCI-01-0247-FEDER-046102 (01/07/2020-30/06/2023).
58. Recyfilm- *Reciclagem de filmes multicamada utilizados em embalagem*. Ref. POCI-01-0247-FEDER-047006 (01/12/2020-30/06/2023).
59. REVIVING - revisiting mine tailings to innovate metals biorecovery. Ref. ERA-MIN/0007/2019 (01/11/2020-31/10/2023).
60. RN21 - Inovação na Fileira da Resina Natural para Reforço da Bioeconomia Nacional (01/09/2022-31/12/2025).
61. S4PLAST- Sustainable Plastics Advanced Solutions. Ref. POCI-01-0247-FEDER-046089 (01/07/2020-30/06/2023).
62. Science DiabetICC Footwear: Desenvolvimento de calçado terapêutico inovador para pé diabético* (07/07/2022-19/08/2022).
63. ShellMould - Um novo conceito de molde integrador para maximizar a produção de embalagens de vidro - afirmação no mercado internacional. Ref. POCI-01-0247-FEDER-039913 (01/10/2019-30/09/2022).
64. Sim2AM - *Computational methods for optimizing the SLM additive manufacturing process*. Ref. PTDC/EME-EME/31657/2017 (22/06/2018-21/06/2022).
65. SIRAM- Sustainable innovations for Regenerative Agriculture in the Mediterranean area. Ref. PRIMA/0003/2021 (01/06/2022 - 31/05/2025).
66. SMART Display - Haptic touchscreens display "life front" Ref. POCI-01-0247-FEDER-047153 (01/02/2021-30/06/2023).
67. SMARTLUB - Smart self-lubricant coatings with controlled release of the lubricious agent for high temperature applications. Ref. POCI-01-0145-FEDER-031807 (26/07/2018-25/07/2022).
68. Soft4Sense - Smart Surfaces for Reliable Tooling Integration. Ref. POCI-01-0247-FEDER-045921 (01/04/2020-31/03/2023).
69. SSWeld - *Soldabilidade em estado sólido de sistemas heterogéneos à base de aço inoxidável*. Ref. IPL/2021/SSWeld (06/09/2021-06/09/2022).
70. StarchFire - *Desenvolvimento de retardante de chama através de fontes renováveis. Código do projeto*. Ref. POCI-01-0247-FEDER-069481 (01/01/2021-30/06/2023).

71. TherMechChar-Xsteels - Rumo ao projeto e à conformação virtuais: *Caracterização termomecânica de aços de alto desempenho através de medidas de campo global e do desenvolvimento de um ensaio único*. Ref. CENTRO-01-0145-FEDER-029713 (01/06/2018-31/05/2022).
72. TOOLMAX - Gestão e Maximização do Tempo de Vida da Ferramenta de Corte. Ref. POCI-01-0247-FEDER-039884 (01/07/2019-30/06/2022).
73. Tribological evaluation of functionalised polymers on diamond-like carbon coatings for novel ecological and sustainable lubrication systems. Ref. TTRF 2022 (17/11/2022-31/12/2023).
74. WoW - Wireless bioMonitoring stickers and smart bed architecture: toWards Untethered Patients. Ref. POCI-01-0247-FEDER-045913 (01/04/2020-01/04/2023).