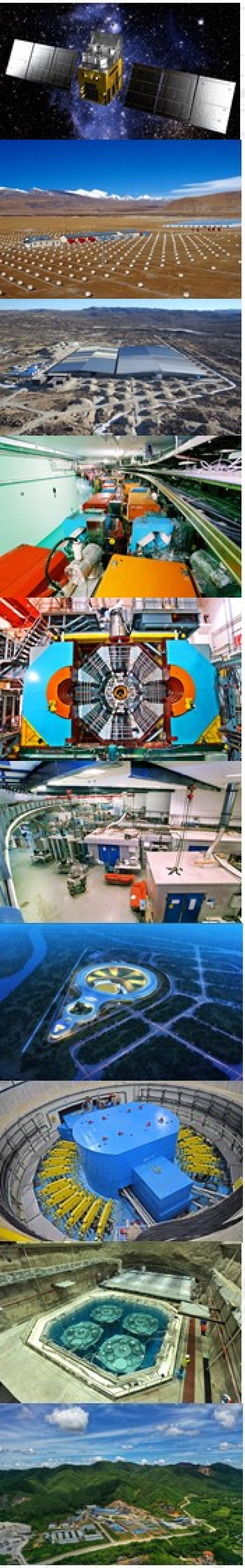

ESI热点论文简报

第Ⅳ期

中国科学院高能物理研究所
文献信息部

2021-07

基于 ESI 数据库分领域热点论文简报

ESI 是基于汤森路透 Web of Science（SCIE/SSCI）所收录的全球 12000 多种学术期刊的 1200 多万条文献记录而建立的计量分析数据库。ESI 针对 22 个专业领域，通过论文数、论文被引频次、论文篇均被引频次、高影响论文（高被引论文和热点论文排重后的简单和）指标，成为当今世界范围内普遍用以评价高校、学术机构、国家/地区国际学术水平及影响力的重要评价指标工具之一。该数据库基于 10 年内文献数据进行综合分析评价，每两月更新一次。

热点论文：ESI 数据库统计筛选出在过去两年内发表，且在近两月内，被引用的次数进入其学术领域前 0.1%的论文。

细分领域：根据 WoS 数据库的领域划分选取了高能所发文比较集中的四个细分领域，“Physics, Particles & Fields”、“Astronomy & Astrophysics”、“Physics, Nuclear”和 “Materials Science, Multidisciplinary”。

目录

本次简报基于 ESI 于 2021 年 7 月 8 日更新的数据，热点论文统计范围为 2019 年 5 月-2021 年 4 月发表的论文，且在 2021 年 3-4 月被引用次数进入物理领域前 0.1%的论文。

❷、❸、❹为对比 2021 年第一、二、三期数据的重复次数

“Physics, Particles & Fields”热点论文 24 篇

1. ❸REVIEW OF PARTICLE PHYSICS, P. A. Zyla, R. M. Barnett, J. Beringer et al., Progress of Theoretical and Experimental Physics, 2020 (2020) 083C01. Cited: 631. https://doi.org/10.1093/ptep/ptaa104
2. ❷Combined measurements of Higgs boson couplings in proton- proton collisions at v s=13TeV, A. M. Sirunyan, A. Tumasyan, W. Adam et al., European Physical Journal C, 79 (2019) 421. Cited: 202. https://doi.org/10.1140/epjc/s10052-019-6909-y
3. ❹FLAG Review 2019, S. Aoki, Y. Aoki, D. Becirevic et al., European Physical Journal C, 80 (2020) 113. Cited: 193. https://doi.org/10.1140/epjc/s10052-019-7354-7
4. ❹Pentaquark and Tetraquark States, Y. R. Liu, H. X. Chen, W. Chen et al., Progress in Particle and Nuclear Physics, 107 (2019) 237. Cited: 183. https://doi.org/10.1016/j.ppnp.2019.04.003
5. ❹Tests of general relativity with the binary black hole signals from the LIGO-Virgo catalog GWTC-1, B. P. Abbott, R. Abbott, T. D. Abbott et al., Physical Review D, 100 (2019) 104036. Cited: 175. https://doi.org/10.1103/PhysRevD.100.104036
6. ❹Bounds on slow roll and the de Sitter Swampland, S. K. Garg and C. Krishnan, Journal of High Energy Physics, (2019) 75. Cited: 143. https://doi.org/10.1007/JHEP11(2019)075
7. ❹Replica wormholes and the entropy of Hawking radiation, A. Almheiri, T. Hartman, J. Maldacena et al., Journal of High Energy Physics, (2020) 13. Cited: 135. https://doi.org/10.1007/JHEP05(2020)013
8. ❹The Page curve of Hawking radiation from semiclassical geometry, A. Almheiri, R. Mahajan, J. Maldacena et al., Journal of High Energy Physics, (2020) 149. Cited: 131. https://doi.org/10.1007/JHEP03(2020)149
9. ❷Chiral crossover in QCD at zero and non-zero chemical potentials HotQCD Collaboration, A. Bazavov, H. T. Ding, R. Hegde et al., Physics Letters B, 795 (2019) 15. Cited: 119. https://doi.org/10.1016/j.physletb.2019.05.013
10. ❸A new evaluation of the hadronic vacuum polarisation contributions to the muon anomalous magnetic moment and to alpha(m(Z)(2)), M. Davier, A. Hoecker, B. Malaescu et al., European Physical Journal C, 80 (2020) 241. Cited: 112. https://doi.org/10.1140/epjc/s10052-020-7792-2
11. ❷Physics beyond colliders at CERN: beyond the Standard Model working group report, J. Beacham, C. Burrage, D. Curtin et al., Journal of Physics G-Nuclear and Particle Physics, 47 (2020) 10501. Cited: 104. https://doi.org/10.1088/1361-6471/ab4cd2
12. ❹Entanglement wedge reconstruction and the information paradox, G. Penington, Journal of High Energy Physics, (2020) 2. Cited: 103. https://doi.org/10.1007/JHEP09(2020)002

13. ❸Excess electronic recoil events in XENON1T, E. Aprile, J. Aalbers, F. Agostini et al., Physical Review D, 102 (2020) 72004. Cited: 98. https://doi.org/10.1103/PhysRevD.102.072004

14. ❷Combined measurements of Higgs boson production and decay using up to 80 fb(-1) of proton-proton collision data at root S=13 TeV collected with the ATLAS experiment, G. Aad, B. Abbott, D. C. Abbott et al., Physical Review D, 101 (2020) 12002. Cited: 94. https://doi.org/10.1103/PhysRevD.101.012002

15. ❷The fate of hints: updated global analysis of three-flavor neutrino oscillations, I. Esteban, M. C. Gonzalez-Garcia, M. Maltoni et al., Journal of High Energy Physics, (2020) 178. Cited: 91. https://doi.org/10.1007/JHEP09(2020)178

16. Gravitational wave energy budget in strongly supercooled phase transitions, J. Ellis, M. Lewicki, J. M. No et al., Journal of Cosmology and Astroparticle Physics, (2019) 24. Cited: 70. https://doi.org/10.1088/1475-7516/2019/06/024

17. Measurement of J/psi production in association with a W-+/- boson with pp data at 8 TeV, M. Aaboud, G. Aad, B. Abbott et al., Journal of High Energy Physics, (2020) 95. Cited: 31. https://doi.org/10.1007/JHEP01(2020)095

18. Fluctuations of anisotropic flow in Pb plus Pb collisions at root s(NN)=5.02 TeV with the ATLAS detector, M. Aaboud, G. Aad, B. Abbott et al., Journal of High Energy Physics, (2020) 51. Cited: 31. https://doi.org/10.1007/JHEP01(2020)051

19. 2020 global reassessment of the neutrino oscillation picture, P. F. de Salas, D. V. Forero, S. Gariazzo et al., Journal of High Energy Physics, (2021) 71. Cited: 31. https://doi.org/10.1007/JHEP02(2021)071

20. Phase transitions in an expanding universe: stochastic gravitational waves in standard and non-standard histories, H. K. Guo, K. Sinha, D. Vagie et al., Journal of Cosmology and Astroparticle Physics, (2021) 1. Cited: 30. https://doi.org/10.1088/1475-7516/2021/01/001

21. Primordial black holes as a dark matter candidate, A. M. Green and B. J. Kavanagh, Journal of Physics G-Nuclear and Particle Physics, 48 (2021) 43001. Cited: 19. https://doi.org/10.1088/1361-6471/abc534

22. Islands in de Sitter space, V. Balasubramanian, A. Kar, and T. Ugajin, Journal of High Energy Physics, (2021) 72. Cited: 17. https://doi.org/10.1007/JHEP02(2021)072

23. Double cover of modular S-4 for flavour model building, P. P. Novichkov, J. T. Penedo, and S. T. Petcov, Nuclear Physics B, 963 (2021) 115301. Cited: 13. https://doi.org/10.1016/j.nuclphysb.2020.115301

24. Towards unification of quark and lepton flavors in A4 modular invariance, H. Okada and M. Tanimoto, European Physical Journal C, 81 (2021) 52. Cited: 12. https://doi.org/10.1140/epjc/s10052-021-08845-y

“Physics, Nuclear”热点论文 5 篇

1. ❹Phy-X / PSD: Development of a user friendly online software for calculation of parameters relevant to radiation shielding and dosimetry, E. Sakar, O. F. Ozpolat, B. Alim et al., Radiation Physics and Chemistry, 166 (2020) 108496. Cited: 220. https://doi.org/10.1016/j.radphyschem.2019.108496
2. ❹Pentaquark and Tetraquark States, Y. R. Liu, H. X. Chen, W. Chen et al., Progress in Particle and Nuclear Physics, 107 (2019) 237. Cited: 183. https://doi.org/10.1016/j.ppnp.2019.04.003
3. ❷Chiral crossover in QCD at zero and non-zero chemical potentials HotQCD Collaboration, A. Bazavov, H. T. Ding, R. Hegde et al., Physics Letters B, 795 (2019) 15. Cited: 119. https://doi.org/10.1016/j.physletb.2019.05.013
4. ❷Physics beyond colliders at CERN: beyond the Standard Model working group report, J. Beacham, C. Burrage, D. Curtin et al., Journal of Physics G-Nuclear and Particle Physics, 47 (2020) 10501. Cited: 104. https://doi.org/10.1088/1361-6471/ab4cd2
5. Primordial black holes as a dark matter candidate, A. M. Green and B. J. Kavanagh, Journal of Physics G-Nuclear and Particle Physics, 48 (2021) 43001. Cited: 19. https://doi.org/10.1088/1361-6471/abc534

“Astronomy & Astrophysics”热点论文 33 篇

1. ❹Planck 2018 results: VI. Cosmological parameters, N. Aghanim, Y. Akrami, M. Ashdown et al., Astronomy & Astrophysics, 641 (2020) A6. Cited: 1273. https://doi.org/10.1051/0004-6361/201833910
2. ❹Large MagellanicCloud Cepheid Standards Provide a 1% Foundation for the Determination of the Hubble Constant and Stronger Evidence for Physics beyond Lambda CDM, A. G. Riess, S. Casertano, W. L. Yuan et al., Astrophysical Journal, 876 (2019) 85. Cited: 667. https://doi.org/10.3847/1538-4357/ab1422
3. ❹Relativistic Shapiro delay measurements of an extremely massive millisecond pulsar, H. T. Cromartie, E. Fonseca, S. M. Ransom et al., Nature Astronomy, 4 (2020) 72. Cited: 405. https://doi.org/10.1038/s41550-019-0880-2
4. ❹GW190425: Observation of a Compact Binary Coalescence with Total Mass similar to 3.4 M-circle dot, B. P. Abbott, R. Abbott, T. D. Abbott et al., Astrophysical Journal Letters, 892 (2020) L3. Cited: 358. https://doi.org/10.3847/2041-8213/ab75f5

5. ❹GW190814: Gravitational Waves from the Coalescence of a 23 Solar Mass Black Hole with a 2.6 Solar Mass Compact Object, R. Abbott, T. D. Abbott, S. Abraham et al., Astrophysical Journal Letters, 896 (2020) L44. Cited: 311. https://doi.org/10.3847/2041-8213/ab960f

6. ❹Planck 2018 results: X. Constraints on inflation, Y. Akrami, F. Arroja, M. Ashdown et al., Astronomy & Astrophysics, 641 (2020) A10. Cited: 290. https://doi.org/10.1051/0004-6361/201833887

7. ❹PSR J0030+0451 Mass and Radius from NICER Data and Implications for the Properties of Neutron Star Matter, M. C. Miller, F. K. Lamb, A. J. Dittmann et al., Astrophysical Journal Letters, 887 (2019) L24. Cited: 268. https://doi.org/10.3847/2041-8213/ab50c5

8. ❹Binary Black Hole Population Properties Inferred from the First and Second Observing Runs of Advanced LIGO and Advanced Virgo, B. P. Abbott, R. Abbott, T. D. Abbott et al., Astrophysical Journal Letters, 882 (2019) L24. Cited: 250. https://doi.org/10.3847/2041-8213/ab3800

9. ❹A NICER View of PSR J0030+0451: Millisecond Pulsar Parameter Estimation, T. E. Riley, A. L. Watts, S. Bogdanov et al., Astrophysical Journal Letters, 887 (2019) L21. Cited: 243. https://doi.org/10.3847/2041-8213/ab481c

10. ❹Modules for Experiments in Stellar Astrophysics (MESA): Pulsating Variable Stars, Rotation, Convective Boundaries, and Energy Conservation, B. Paxton, R. Smolec, J. Schwab et al., Astrophysical Journal Supplement Series, 243 (2019) 10. Cited: 224. https://doi.org/10.3847/1538-4365/ab2241

11. ❸Fermi Large Area Telescope Fourth Source Catalog, S. Abdollahi, F. Acero, M. Ackermann et al., Astrophysical Journal Supplement Series, 247 (2020) 33. Cited: 220. https://doi.org/10.3847/1538-4365/ab6bcb

12. ❷Overview of the DESI Legacy Imaging Surveys, A. Dey, D. J. Schlegel, D. Lang et al., Astronomical Journal, 157 (2019) 168. Cited: 183. https://doi.org/10.3847/1538-3881/ab089d

13. ❹Tests of general relativity with the binary black hole signals from the LIGO-Virgo catalog GWTC-1, B. P. Abbott, R. Abbott, T. D. Abbott et al., Physical Review D, 100 (2019) 104036. Cited: 175. https://doi.org/10.1103/PhysRevD.100.104036

14. ❷H0LiCOW-XIII. A 2.4 per cent measurement of H-0 from lensed quasars: 5.3 sigma tension between early- and late-Universe probes, K. C. Wong, S. H. Suyu, G. C. F. Chen et al., Monthly Notices of the Royal Astronomical Society, 498 (2020) 1420. Cited: 162. https://doi.org/10.1093/mnras/stz3094

15. A 3D Dust Map Based on Gaia, Pan-STARRS 1, and 2MASS, G. M. Green, E. Schlafly, C. Zucker et al., Astrophysical Journal, 887 (2019) 93. Cited: 161. https://doi.org/10.3847/1538-4357/ab5362

16. ❹The 16th Data Release of the Sloan Digital Sky Surveys: First Release from the APOGEE-2 Southern Survey and Full Release of eBOSS Spectra, R. Ahumada, C. Allende Prieto, A. Almeida et al., Astrophysical Journal Supplement Series, 249 (2020) 3. Cited: 161. https://doi.org/10.3847/1538-4365/ab929e

17. ❷The Revised TESS Input Catalog and Candidate Target List, K. G. Stassun, R. J. Oelkers, M. Paegert et al., Astronomical Journal, 158 (2019) 138. Cited: 145. https://doi.org/10.3847/1538-3881/ab3467

18. ❷Chiral crossover in QCD at zero and non-zero chemical potentials HotQCD Collaboration, A. Bazavov, H. T. Ding, R. Hegde et al., Physics Letters B, 795 (2019) 15. Cited: 119. https://doi.org/10.1016/j.physletb.2019.05.013

19. ❸Excess electronic recoil events in XENON1T, E. Aprile, J. Aalbers, F. Agostini et al., Physical Review D, 102 (2020) 72004. Cited: 98. https://doi.org/10.1103/PhysRevD.102.072004

20. ❷Combined measurements of Higgs boson production and decay using up to 80 fb(-1) of proton-proton collision data at root S=13 TeV collected with the ATLAS experiment, G. Aad, B. Abbott, D. C. Abbott et al., Physical Review D, 101 (2020) 12002. Cited: 94. https://doi.org/10.1103/PhysRevD.101.012002

21. Global Bathymetry and Topography at 15 Arc Sec: SRTM15+, B. Tozer, D. T. Sandwell, W. H. F. Smith et al., Earth and Space Science, 6 (2019) 1847. Cited: 74. https://doi.org/10.1029/2019EA000658

22. Gravitational wave energy budget in strongly supercooled phase transitions, J. Ellis, M. Lewicki, J. M. No et al., Journal of Cosmology and Astroparticle Physics, (2019) 24. Cited: 70. https://doi.org/10.1088/1475-7516/2019/06/024

23. In-orbit Demonstration of X-Ray Pulsar Navigation with the Insight-HXMT Satellite, S. J. Zheng, S. N. Zhang, F. J. Lu et al., Astrophysical Journal Supplement Series, 244 (2019) 1. Cited: 62. https://doi.org/10.3847/1538-4365/ab3718

24. Formation and Evolution of Compact-object Binaries in AGN Disks, H. Tagawa, Z. Haiman, and B. Kocsis, Astrophysical Journal, 898 (2020) 25. Cited: 45. https://doi.org/10.3847/1538-4357/ab9b8c

25. Possible periodic activity in the repeating FRB 121102, K. M. Rajwade, M. B. Mickaliger, B. W. Stappers et al., Monthly Notices of the Royal Astronomical Society, 495 (2020) 3551. Cited: 41. https://doi.org/10.1093/mnras/staa1237

26. Hot disc of the Swift J0243.6+6124 revealed by Insight-HXMT, V. Doroshenko, S. N. Zhang, A. Santangelo et al., Monthly Notices of the Royal Astronomical Society, 491 (2020) 1857. Cited: 34. https://doi.org/10.1093/mnras/stz2879

27. Phase transitions in an expanding universe: stochastic gravitational waves in standard and non-standard histories, H. K. Guo, K. Sinha, D. Vagie et al., Journal of Cosmology and Astroparticle Physics, (2021) 1. Cited: 30. https://doi.org/10.1088/1475-7516/2021/01/001

28. The LOFAR Two-meter Sky Survey: Deep Fields Data Release 1: I. Direction-dependent calibration and imaging, C. Tasse, T. Shimwell, M. J. Hardcastle et al., Astronomy & Astrophysics, 648 (2021) A1. Cited: 19. https://doi.org/10.1051/0004-6361/202038804

29. Repeating behaviour of FRB 121102: periodicity, waiting times, and energy distribution, M. Cruces, L. G. Spitler, P. Scholz et al., Monthly Notices of the Royal Astronomical Society, 500 (2021) 448. Cited: 17. https://doi.org/10.1093/mnras/staa3223

30. Seventeen Tidal Disruption Events from the First Half of ZTF Survey Observations: Entering a New Era of Population Studies, S. van Velzen, S. Gezari, E. Hammerstein et al., Astrophysical Journal, 908 (2021) 4. Cited: 17. https://doi.org/10.3847/1538-4357/abc258

31. The LOFAR Two-meter Sky Survey: Deep Fields Data Release 1 II. The ELAIS-N1 LOFAR deep field, J. Sabater, P. N. Best, C. Tasse et al., Astronomy & Astrophysics, 648 (2021) A2. Cited: 13. https://doi.org/10.1051/0004-6361/202038828

32. The LOFAR Two-meter Sky Survey: Deep Fields Data Release 1 III. Host-galaxy identifications and value added catalogues, R. Kondapally, P. N. Best, M. J. Hardcastle et al., Astronomy & Astrophysics, 648 (2021) A3. Cited: 13. https://doi.org/10.1051/0004-6361/202038813

33. Diagnostic of the spectral properties of Aquila X-1 by Insight-HXMT snapshots during the early propeller phase, C. Gungor, M. Y. Ge, S. Zhang et al., Journal of High Energy Astrophysics, 25 (2020) 10. Cited: 9. https://doi.org/10.1016/j.jheap.2019.12.001

“Materials Science, Multidisciplinary”热点论文 303 篇

1. ❹Methylammonium Chloride Induces Intermediate Phase Stabilization for Efficient Perovskite Solar Cells, M. Kim, G. H. Kim, T. K. Lee et al., Joule, 3 (2019) 2179. Cited: 475. https://doi.org/10.1016/j.joule.2019.06.014

2. ❹Present and Future of Surface-Enhanced Raman Scattering, J. Langer, D. J. de Aberasturi, J. Aizpurua et al., Acs Nano, 14 (2020) 28. Cited: 473. https://doi.org/10.1021/acsnano.9b04224

3. ❹Diagnosing COVID-19: The Disease and Tools for Detection, B. Udugama, P. Kadhiresan, H. N. Kozlowski et al., Acs Nano, 14 (2020) 3822. Cited: 467. https://doi.org/10.1021/acsnano.0c02624

4. ❹High-entropy alloys, E. P. George, D. Raabe, and R. O. Ritchie, Nature Reviews Materials, 4 (2019) 515. Cited: 430. https://doi.org/10.1038/s41578-019-0121-4

5. ❹Single-Junction Organic Photovoltaic Cells with Approaching 18% Efficiency, Y. Cui, H. F. Yao, J. Q. Zhang et al., Advanced Materials, 32 (2020) 1908205. Cited: 422. https://doi.org/10.1002/adma.201908205

6. ❹Solar cell efficiency tables (version 54), M. A. Green, E. D. Dunlop, D. H. Levi et al., Progress in Photovoltaics, 27 (2019) 565. Cited: 414. https://doi.org/10.1002/pip.3171

7. ❸Single-Junction Polymer Solar Cells with 16.35% Efficiency Enabled by a Platinum(II) Complexation Strategy, X. P. Xu, K. Feng, Z. Z. Bi et al., Advanced Materials, 31 (2019) 1901872. Cited: 396. https://doi.org/10.1002/adma.201901872

8. ❹A Review of Perovskites Solar Cell Stability, R. Wang, M. Mujahid, Y. Duan et al., Advanced Functional Materials, 29 (2019) 1808843. Cited: 384. https://doi.org/10.1002/adfm.201808843

9. ❹Fundamentals of inorganic solid-state electrolytes for batteries, T. Famprikis, P. Canepa, J. A. Dawson et al., Nature Materials, 18 (2019) 1278. Cited: 353. https://doi.org/10.1038/s41563-019-0431-3

10. ❹Advances and challenges in understanding the electrocatalytic conversion of carbon dioxide to fuels, Y. Y. Birdja, E. Perez-Gallent, M. C. Figueiredo et al., Nature Energy, 4 (2019) 732. Cited: 339. https://doi.org/10.1038/s41560-019-0450-y

11. ❹The entry of nanoparticles into solid tumours, S. Sindhwani, A. M. Syed, J. Ngai et al., Nature Materials, 19 (2020) 566. Cited: 331. https://doi.org/10.1038/s41563-019-0566-2

12. ❹Defect-Rich Heterogeneous MoS2/NiS2 Nanosheets Electrocatalysts for Efficient Overall Water Splitting, J. H. Lin, P. C. Wang, H. H. Wang et al., Advanced Science, 6 (2019) 1900246. Cited: 322. https://doi.org/10.1002/advs.201900246

13. ❹Recent advances and applications of machine learning in solid-state materials science, J. Schmidt, M. R. G. Marques, S. Botti et al., Npj Computational Materials, 5 (2019) 83. Cited: 315. https://doi.org/10.1038/s41524-019-0221-0

14. ❹X-ray photoelectron spectroscopy: Towards reliable binding energy referencing, G. Greczynski and L. Hultman, Progress in Materials Science, 107 (2020) 100591. Cited: 304. https://doi.org/10.1016/j.pmatsci.2019.100591

15. ❹Alkyl Chain Tuning of Small Molecule Acceptors for Efficient Organic Solar Cells, K. Jiang, Q. Y. Wei, J. Y. L. Lai et al., Joule, 3 (2019) 3020. Cited: 301. https://doi.org/10.1016/j.joule.2019.09.010

16. ❹Challenges and opportunities towards fast-charging battery materials, Y. Y. Liu, Y. Y. Zhu, and Y. Cui, Nature Energy, 4 (2019) 540. Cited: 300. https://doi.org/10.1038/s41560-019-0405-3

17. ❹Solar cell efficiency tables (Version 55), M. A. Green, E. D. Dunlop, D. H. Levi et al., Progress in Photovoltaics, 28 (2020) 3. Cited: 296. https://doi.org/10.1002/pip.3228

18. ❹Self-Supported Transition-Metal-Based Electrocatalysts for Hydrogen and Oxygen Evolution, H. M. Sun, Z. H. Yan, F. M. Liu et al., Advanced Materials, 32 (2020) 1806326. Cited: 295. https://doi.org/10.1002/adma.201806326

19. ❹17% Efficient Organic Solar Cells Based on Liquid Exfoliated WS2 as a Replacement for PEDOT:PSS, Y. B. Lin, B. Adilbekova, Y. Firdaus et al., Advanced Materials, 31 (2019) 1902965. Cited: 283. https://doi.org/10.1002/adma.201902965

20. ❹Advanced rechargeable zinc-based batteries: Recent progress and future perspectives, H. F. Li, L. T. Ma, C. P. Han et al., Nano Energy, 62 (2019) 550. Cited: 280. https://doi.org/10.1016/j.nanoen.2019.05.059

21. ❹Parity-time symmetry and exceptional points in photonics, S. K. Ozdemir, S. Rotter, F. Nori et al., Nature Materials, 18 (2019) 783. Cited: 274. https://doi.org/10.1038/s41563-019-0304-9

22. ❹Dual Cocatalysts in TiO2 Photocatalysis, A. Y. Meng, L. Y. Zhang, B. Cheng et al., Advanced Materials, 31 (2019) 1807660. Cited: 268. https://doi.org/10.1002/adma.201807660

23. ❹Monolithic all-perovskite tandem solar cells with 24.8% efficiency exploiting comproportionation to suppress Sn(II) oxidation in precursor ink, R. X. Lin, K. Xiao, Z. Y. Qin et al., Nature Energy, 4 (2019) 864. Cited: 266. https://doi.org/10.1038/s41560-019-0466-3

24. ❹16.67% Rigid and 14.06% Flexible Organic Solar Cells Enabled by Ternary Heterojunction Strategy, T. T. Yan, W. Song, J. M. Huang et al., Advanced Materials, 31 (2019) 1902210. Cited: 265. https://doi.org/10.1002/adma.201902210

25. ❹Achieving high energy density and high power density with pseudocapacitive materials, C. Choi, D. S. Ashby, D. M. Butts et al., Nature Reviews Materials, 5 (2020) 5. Cited: 264. https://doi.org/10.1038/s41578-019-0142-z

26. ❸Recommended Practices and Benchmark Activity for Hydrogen and Oxygen Electrocatalysis in Water Splitting and Fuel Cells, C. Wei, R. R. Rao, J. Y. Peng et al., Advanced Materials, 31 (2019) 1806296. Cited: 262. https://doi.org/10.1002/adma.201806296

27. ❹Cd-Free Cu(In,Ga)(Se,S)(2) Thin-Film Solar Cell With Record Efficiency of 23.35%, M. Nakamura, K. Yamaguchi, Y. Kimoto et al., Ieee Journal of Photovoltaics, 9 (2019) 1863. Cited: 261. https://doi.org/10.1109/JPHOTOV.2019.2937218

28. ❹Managing grains and interfaces via ligand anchoring enables 22.3%-efficiency inverted perovskite solar cells, X. P. Zheng, Y. Hou, C. X. Bao et al., Nature Energy, 5 (2020) 131. Cited: 256. https://doi.org/10.1038/s41560-019-0538-4

29. ❷Electromagnetic Response and Energy Conversion for Functions and Devices in Low-Dimensional Materials, M. S. Cao, X. X. Wang, M. Zhang et al., Advanced Functional Materials, 29 (2019) 1807398. Cited: 253. https://doi.org/10.1002/adfm.201807398

30. ❹Ultrathin, flexible, solid polymer composite electrolyte enabled with aligned nanoporous host for lithium batteries, J. Y. Wan, J. Xie, X. Kong et al., Nature Nanotechnology, 14 (2019) 705. Cited: 252. https://doi.org/10.1038/s41565-019-0465-3

31. ❹3D Printing of Personalized Thick and Perfusable Cardiac Patches and Hearts, N. Noor, A. Shapira, R. Edri et al., Advanced Science, 6 (2019) 1900344. Cited: 249. https://doi.org/10.1002/advs.201900344

32. ❹Smart cancer nanomedicine, R. van der Meel, E. Sulheim, Y. Shi et al., Nature Nanotechnology, 14 (2019) 1007. Cited: 246. https://doi.org/10.1038/s41565-019-0567-y

33. ❹Graphitic carbon nitride (g-C3N4)-based metal-free photocatalysts for water splitting: A review, A. Mishra, A. Mehta, S. Basu et al., Carbon, 149 (2019) 693. Cited: 238. https://doi.org/10.1016/j.carbon.2019.04.104

34. ❹Aerosol Filtration Efficiency of Common Fabrics Used in Respiratory Cloth Masks, A. Konda, A. Prakash, G. A. Moss et al., Acs Nano, 14 (2020) 6339. Cited: 232. https://doi.org/10.1021/acsnano.0c03252

35. ❹Dual-Functional Plasmonic Photothermal Biosensors for Highly Accurate Severe Acute Respiratory Syndrome Coronavirus 2 Detection, G. G. Qiu, Z. B. Gai, Y. L. Tao et al., Acs Nano, 14 (2020) 5268. Cited: 229. https://doi.org/10.1021/acsnano.0c02439

36. ❸Biomass-derived porous carbon materials with different dimensions for supercapacitor electrodes: a review, Z. H. Bi, Q. Q. Kong, Y. F. Cao et al., Journal of Materials Chemistry A, 7 (2019) 16028. Cited: 225. https://doi.org/10.1039/c9ta04436a

37. ❹Metal organic frameworks derived single atom catalysts for electrocatalytic energy conversion, T. T. Sun, L. B. Xu, D. S. Wang et al., Nano Research, 12 (2019) 2067. Cited: 224. https://doi.org/10.1007/s12274-019-2345-4

38. ❹Electronic Skin: Recent Progress and Future Prospects for Skin-Attachable Devices for Health Monitoring, Robotics, and Prosthetics, J. C. Yang, J. Mun, S. Y. Kwon et al., Advanced Materials, 31 (2019) 1904765. Cited: 221. https://doi.org/10.1002/adma.201904765

39. ❹Rapid Detection of COVID-19 Causative Virus (SARS-CoV-2) in Human Nasopharyngeal Swab Specimens Using Field-Effect Transistor-Based Biosensor, G. Seo, G. Lee, M. J. Kim et al., Acs Nano, 14 (2020) 5135. Cited: 219. https://doi.org/10.1021/acsnano.0c02823

40. ❹On the origin of contact-electrification, Z. L. Wang and A. C. Wang, Materials Today, 30 (2019) 34. Cited: 217. https://doi.org/10.1016/j.mattod.2019.05.016

41. ❹3D reduced graphene oxide/FeNi3-ionic liquid nanocomposite modified sensor: an electrical synergic effect for development of tert-butylhydroquinone and folic acid sensor, F. Tahernejad-Javazmi, M. Shabani-Nooshabadi, and H. Karimi-Maleh, Composites Part B-Engineering, 172 (2019) 666. Cited: 216. https://doi.org/10.1016/j.compositesb.2019.05.065

42. ❷Fiber/Fabric-Based Piezoelectric and Triboelectric Nanogenerators for Flexible/Stretchable and Wearable Electronics and Artificial Intelligence, K. Dong, X. Peng, and Z. L. Wang, Advanced Materials, 32 (2020) 1902549. Cited: 212. https://doi.org/10.1002/adma.201902549

43. ❸Minimizing non-radiative recombination losses in perovskite solar cells, D. Y. Luo, R. Su, W. Zhang et al., Nature Reviews Materials, 5 (2020) 44. Cited: 196. https://doi.org/10.1038/s41578-019-0151-y

44. ❹Designing solid-state electrolytes for safe, energy-dense batteries, Q. Zhao, S. Stalin, C. Z. Zhao et al., Nature Reviews Materials, 5 (2020) 229. Cited: 195. https://doi.org/10.1038/s41578-019-0165-5

45. ❸Anion-Modulated HER and OER Activities of 3D Ni-V-Based Interstitial Compound Heterojunctions for High-Efficiency and Stable Overall Water Splitting, H. J. Yan, Y. Xie, A. P. Wu et al., Advanced Materials, 31 (2019) 1901174. Cited: 191. https://doi.org/10.1002/adma.201901174

46. ❷Advanced Carbon-Based Anodes for Potassium-Ion Batteries, X. Wu, Y. L. Chen, Z. Xing et al., Advanced Energy Materials, 9 (2019) 1900343. Cited: 189. https://doi.org/10.1002/aenm.201900343

47. ❹In Situ Grown Monolayer N-Doped Graphene on CdS Hollow Spheres with Seamless Contact for Photocatalytic CO2 Reduction, C. B. Bie, B. C. Zhu, F. Y. Xu et al., Advanced Materials, 31 (2019) 1902868. Cited: 186. https://doi.org/10.1002/adma.201902868

48. ❸From Lead Halide Perovskites to Lead-Free Metal Halide Perovskites and Perovskite Derivatives, Z. W. Xiao, Z. N. Song, and Y. F. Yan, Advanced Materials, 31 (2019) 1803792. Cited: 186. https://doi.org/10.1002/adma.201803792

49. Advances in Electrocatalytic N-2 Reduction-Strategies to Tackle the Selectivity Challenge, G. F. Chen, S. Y. Ren, L. L. Zhang et al., Small Methods, 3 (2019) 1800337. Cited: 185. https://doi.org/10.1002/smtd.201800337

50. ❹High-energy long-cycling all-solid-state lithium metal batteries enabled by silver-carbon composite anodes, Y. G. Lee, S. Fujiki, C. Jung et al., Nature Energy, 5 (2020) 299. Cited: 181. https://doi.org/10.1038/s41560-020-0575-z

51. Near-Infrared-II Molecular Dyes for Cancer Imaging and Surgery, S. J. Zhu, R. Tian, A. L. Antaris et al., Advanced Materials, 31 (2019) 1900321. Cited: 180. https://doi.org/10.1002/adma.201900321

52. ❹Consensus statement for stability assessment and reporting for perovskite photovoltaics based on ISOS procedures, M. V. Khenkin, E. A. Katz, A. Abate et al., Nature Energy, 5 (2020) 35. Cited: 178. https://doi.org/10.1038/s41560-019-0529-5

53. ❹Solar cell efficiency tables (version 56), M. A. Green, E. D. Dunlop, J. Hohl-Ebinger et al., Progress in Photovoltaics, 28 (2020) 629. Cited: 177. https://doi.org/10.1002/pip.3303

54. ❷Conductive MXene Nanocomposite Organohydrogel for Flexible, Healable, Low-Temperature Tolerant Strain Sensors, H. Liao, X. L. Guo, P. B. Wan et al., Advanced Functional Materials, 29 (2019) 1904507. Cited: 175. https://doi.org/10.1002/adfm.201904507

55. ❹Selective visible-light-driven photocatalytic CO2 reduction to CH4 mediated by atomically thin CuIn5S8 layers, X. D. Li, Y. F. Sun, J. Q. Xu et al., Nature Energy, 4 (2019) 690. Cited: 175. https://doi.org/10.1038/s41560-019-0431-1

56. ❹Current understanding and challenges of solar-driven hydrogen generation using polymeric photocatalysts, Y. O. Wang, A. Vogel, M. Sachs et al., Nature Energy, 4 (2019) 746. Cited: 175. https://doi.org/10.1038/s41560-019-0456-5

57. ❹3D printing of Aluminium alloys: Additive Manufacturing of Aluminium alloys using selective laser melting, N. T. Aboulkhair, M. Simonelli, L. Parry et al., Progress in Materials Science, 106 (2019) 100578. Cited: 174. https://doi.org/10.1016/j.pmatsci.2019.100578

58. ❸Long cycle life and dendrite-free lithium morphology in anode-free lithium pouch cells enabled by a dual-salt liquid electrolyte, R. Weber, M. Genovese, A. J. Louli et al., Nature Energy, 4 (2019) 683. Cited: 173. https://doi.org/10.1038/s41560-019-0428-9

59. ❹Trace doping of multiple elements enables stable battery cycling of LiCoO2 at 4.6V, J. N. Zhang, Q. H. Li, C. Y. Ouyang et al., Nature Energy, 4 (2019) 594. Cited: 171. https://doi.org/10.1038/s41560-019-0409-z

60. ❸2D V-V Binary Materials: Status and Challenges, S. Y. Guo, Y. P. Zhang, Y. Q. Ge et al., Advanced Materials, 31 (2019) 1902352. Cited: 171. https://doi.org/10.1002/adma.201902352

61. Recent progress and perspectives on aqueous Zn-based rechargeable batteries with mild aqueous electrolytes, X. H. Zeng, J. N. Hao, Z. J. Wang et al., Energy Storage Materials, 20 (2019) 410. Cited: 168. https://doi.org/10.1016/j.ensm.2019.04.022

62. ❸High-energy lithium metal pouch cells with limited anode swelling and long stable cycles, C. J. Niu, H. Lee, S. R. Chen et al., Nature Energy, 4 (2019) 551. Cited: 168. https://doi.org/10.1038/s41560-019-0390-6

63. ❹High-nickel layered oxide cathodes for lithium-based automotive batteries, W. D. Li, E. M. Erickson, and A. Manthiram, Nature Energy, 5 (2020) 26. Cited: 167. https://doi.org/10.1038/s41560-019-0513-0

64. ❹Monolithic solid-electrolyte interphases formed in fluorinated orthoformate-based electrolytes minimize Li depletion and pulverization, X. Cao, X. D. Ren, L. F. Zou et al., Nature Energy, 4 (2019) 796. Cited: 165. https://doi.org/10.1038/s41560-019-0464-5

65. ❹Modulating the local coordination environment of single-atom catalysts for enhanced catalytic performance, X. Y. Li, H. P. Rong, J. T. Zhang et al., Nano Research, 13 (2020) 1842. Cited: 165. https://doi.org/10.1007/s12274-020-2755-3

66. ❹Scientific Challenges for the Implementation of Zn-Ion Batteries, L. E. Blanc, D. Kundu, and L. F. Nazar, Joule, 4 (2020) 771. Cited: 165. https://doi.org/10.1016/j.joule.2020.03.002

67. ❹Critical stripping current leads to dendrite formation on plating in lithium anode solid electrolyte cells, J. Kasemchainan, S. Zekoll, D. S. Jolly et al., Nature Materials, 18 (2019) 1105. Cited: 164. https://doi.org/10.1038/s41563-019-0438-9

68. ❹Atomically Dispersed Binary Co-Ni Sites in Nitrogen-Doped Hollow Carbon Nanocubes for Reversible Oxygen Reduction and Evolution, X. P. Han, X. F. Ling, D. S. Yu et al., Advanced Materials, 31 (2019) 1905622. Cited: 162. https://doi.org/10.1002/adma.201905622

69. ❹Molecular magnetism: from chemical design to spin control in molecules, materials and devices, E. Coronado, Nature Reviews Materials, 5 (2020) 87. Cited: 162. https://doi.org/10.1038/s41578-019-0146-8

70. ❹Palladium-Nickel nanoparticles decorated on Functionalized-MWCNT for high precision non-enzymatic glucose sensing, H. Karimi-Maleh, K. Cellat, K. Arikan et al., Materials Chemistry and Physics, 250 (2020) 123042. Cited: 161. https://doi.org/10.1016/j.matchemphys.2020.123042

71. ❸Wide-gap non-fullerene acceptor enabling high-performance organic photovoltaic cells for indoor applications, Y. Cui, Y. M. Wang, J. Bergqvist et al., Nature Energy, 4 (2019) 768. Cited: 159. https://doi.org/10.1038/s41560-019-0448-5

72. Circularly Polarized Luminescence in Nanoassemblies: Generation, Amplification, and Application, Y. T. Sang, J. L. Han, T. H. Zhao et al., Advanced Materials, 32 (2020) 1900110. Cited: 158. https://doi.org/10.1002/adma.201900110

73. ❹Mesoporous Silica Nanoparticles for Drug Delivery, M. Manzano and M. Vallet-Regi, Advanced Functional Materials, 30 (2020) 1902634. Cited: 158. https://doi.org/10.1002/adfm.201902634

74. ❹Multicenter Metal-Organic Framework-Based Ratiometric Fluorescent Sensors, S. Y. Wu, H. Min, W. Shi et al., Advanced Materials, 32 (2020) 1805871. Cited: 155. https://doi.org/10.1002/adma.201805871

75. ❷Evolution and Synthesis of Carbon Dots: From Carbon Dots to Carbonized Polymer Dots, C. L. Xia, S. J. Zhu, T. L. Feng et al., Advanced Science, 6 (2019) 1901316. Cited: 152. https://doi.org/10.1002/advs.201901316

76. ❹Benchmarking the performance of all-solid-state lithium batteries, S. Randau, D. A. Weber, O. Kotz et al., Nature Energy, 5 (2020) 259. Cited: 152. https://doi.org/10.1038/s41560-020-0565-1

77. ❸Perspectives for electrochemical capacitors and related devices, P. Simon and Y. Gogotsi, Nature Materials, 19 (2020) 1151. Cited: 152. https://doi.org/10.1038/s41563-020-0747-z

78. ❸PEDOT:PSS for Flexible and Stretchable Electronics: Modifications, Strategies, and Applications, X. Fan, W. Y. Nie, S. H. Tsai et al., Advanced Science, 6 (2019) 1900813. Cited: 151. https://doi.org/10.1002/advs.201900813

79. ❹Gas sensing mechanisms of metal oxide semiconductors: a focus review, H. C. Ji, W. Zeng, and Y. Q. Li, Nanoscale, 11 (2019) 22664. Cited: 150. https://doi.org/10.1039/c9nr07699a

80. ❸Graphdiyne Derivative as Multifunctional Solid Additive in Binary Organic Solar Cells with 17.3% Efficiency and High Reproductivity, L. Liu, Y. Y. Kan, K. Gao et al., Advanced Materials, 32 (2020) 1907604. Cited: 149. https://doi.org/10.1002/adma.201907604

81. ❹Materials for hydrogen-based energy storage - past, recent progress and future outlook, M. Hirscher, V. A. Yartys, M. Baricco et al., Journal of Alloys and Compounds, 827 (2020) 153548. Cited: 149. https://doi.org/10.1016/j.jallcom.2019.153548

82. Fundamentals of TiO2 Photocatalysis: Concepts, Mechanisms, and Challenges, Q. Guo, C. Y. Zhou, Z. B. Ma et al., Advanced Materials, 31 (2019) 1901997. Cited: 148. https://doi.org/10.1002/adma.201901997

83. ❸Strain Engineering of 2D Materials: Issues and Opportunities at the Interface, Z. H. Dai, L. Q. Liu, and Z. Zhang, Advanced Materials, 31 (2019) 1805417. Cited: 148. https://doi.org/10.1002/adma.201805417

84. ❸Recent Progresses on Defect Passivation toward Efficient Perovskite Solar Cells, F. Gao, Y. Zhao, X. W. Zhang et al., Advanced Energy Materials, 10 (2020) 1902650. Cited: 146. https://doi.org/10.1002/aenm.201902650

85. ❸A Superior delta-MnO2 Cathode and a Self-Healing Zn-delta-MnO2 Battery, D. H. Wang, L. F. Wang, G. J. Liang et al., Acs Nano, 13 (2019) 10643. Cited: 143. https://doi.org/10.1021/acsnano.9b04916

86. ❸Do Zinc Dendrites Exist in Neutral Zinc Batteries: A Developed Electrohealing Strategy to In Situ Rescue In-Service Batteries, Q. Yang, G. J. Bang, Y. Guo et al., Advanced Materials, 31 (2019) 1903778. Cited: 142. https://doi.org/10.1002/adma.201903778

87. ❸Caffeine Improves the Performance and Thermal Stability of Perovskite Solar Cells, R. Wang, J. J. Xue, L. Meng et al., Joule, 3 (2019) 1464. Cited: 140. https://doi.org/10.1016/j.joule.2019.04.005

88. ❸Materials for solar-powered water evaporation, F. Zhao, Y. H. Guo, X. Y. Zhou et al., Nature Reviews Materials, 5 (2020) 388. Cited: 139. https://doi.org/10.1038/s41578-020-0182-4

89. ❹Non-Noble-Metal-Based Electrocatalysts toward the Oxygen Evolution Reaction, Z. P. Wu, X. F. Lu, S. Q. Zang et al., Advanced Functional Materials, 30 (2020) 1910274. Cited: 137. https://doi.org/10.1002/adfm.201910274

90. ❸Efficient Organic Solar Cell with 16.88% Efficiency Enabled by Refined Acceptor Crystallization and Morphology with Improved Charge Transfer and Transport Properties, L. Zhu, M. Zhang, G. Q. Zhou et al., Advanced Energy Materials, 10 (2020) 1904234. Cited: 136. https://doi.org/10.1002/aenm.201904234

91. ❹New Phase for Organic Solar Cell Research: Emergence of Y-Series Electron Acceptors and Their Perspectives, S. X. Li, C. Z. Li, M. M. Shi et al., Acs Energy Letters, 5 (2020) 1554. Cited: 134. https://doi.org/10.1021/acsenergylett.0c00537

92. ❷Defect Engineering on Electrode Materials for Rechargeable Batteries, Y. Q. Zhang, L. Tao, C. Xie et al., Advanced Materials, 32 (2020) 1905923. Cited: 133. https://doi.org/10.1002/adma.201905923

93. ❷High-entropy ceramics, C. Oses, C. Toher, and S. Curtarolo, Nature Reviews Materials, 5 (2020) 295. Cited: 132. https://doi.org/10.1038/s41578-019-0170-8

94. Expediting redox kinetics of sulfur species by atomic-scale electrocatalysts in lithium-sulfur batteries, B. Q. Li, L. Kong, C. X. Zhao et al., Infomat, 1 (2019) 533. Cited: 132. https://doi.org/10.1002/inf2.12056

95. ❹Advancements and Challenges in Potassium Ion Batteries: A Comprehensive Review, R. Rajagopalan, Y. G. Tang, X. B. Ji et al., Advanced Functional Materials, 30 (2020) 1909486. Cited: 130. https://doi.org/10.1002/adfm.201909486

96. ❸Scalable fabrication and coating methods for perovskite solar cells and solar modules, N. G. Park and K. Zhu, Nature Reviews Materials, 5 (2020) 333. Cited: 130. https://doi.org/10.1038/s41578-019-0176-2

97. ❷Implanting Atomic Cobalt within Mesoporous Carbon toward Highly Stable Lithium-Sulfur Batteries, J. Xie, B. Q. Li, H. J. Peng et al., Advanced Materials, 31 (2019) 1903813. Cited: 129. https://doi.org/10.1002/adma.201903813

98. ❹Fine-Tuning Energy Levels via Asymmetric End Groups Enables Polymer Solar Cells with Efficiencies over 17%, Z. H. Luo, R. J. Ma, T. Liu et al., Joule, 4 (2020) 1236. Cited: 129. https://doi.org/10.1016/j.joule.2020.03.023

99. ❸Selective Naked-Eye Detection of SARS-CoV-2 Mediated by N Gene Targeted Antisense Oligonucleotide Capped Plasmonic Nanoparticles, P. Moitra, M. Alafeef, K. Dighe et al., Acs Nano, 14 (2020) 7617. Cited: 129. https://doi.org/10.1021/acsnano.0c03822

100. ❹Ligand-assisted cation-exchange engineering for high-efficiency colloidal Cs(1-x)FA(x)PbI(3) quantum dot solar cells with reduced phase segregation, M. M. Hao, Y. Bai, S. Zeiske et al., Nature Energy, 5 (2020) 79. Cited: 126. https://doi.org/10.1038/s41560-019-0535-7

101. Flexible Hybrid Electronics for Digital Healthcare, Y. J. Ma, Y. C. Zhang, S. S. Cai et al., Advanced Materials, 32 (2020) 1902062. Cited: 126. https://doi.org/10.1002/adma.201902062

102. ❹Advanced Electrocatalysts for the Oxygen Reduction Reaction in Energy Conversion Technologies, X. L. Tian, X. F. Lu, B. Y. Xia et al., Joule, 4 (2020) 45. Cited: 125. https://doi.org/10.1016/j.joule.2019.12.014

103. ❷Macroscopic Spontaneous Polarization and Surface Oxygen Vacancies Collaboratively Boosting CO2 Photoreduction on BiOIO3 Single Crystals, F. Chen, Z. Y. Ma, L. Q. Ye et al., Advanced Materials, 32 (2020) 1908350. Cited: 125. https://doi.org/10.1002/adma.201908350

104. ❷Materials, technological status, and fundamentals of PEM fuel cells - A review, Y. Wang, D. F. R. Diaz, K. S. Chen et al., Materials Today, 32 (2020) 178. Cited: 125. https://doi.org/10.1016/j.mattod.2019.06.005

105. ❷Additive Engineering for Efficient and Stable Perovskite Solar Cells, F. Zhang and K. Zhu, Advanced Energy Materials, 10 (2020) 1902579. Cited: 125. https://doi.org/10.1002/aenm.201902579

106. ❸COVID-19 vaccine development and a potential nanomaterial path forward, M. D. Shin, S. Shukla, Y. H. Chung et al., Nature Nanotechnology, 15 (2020) 646. Cited: 125. https://doi.org/10.1038/s41565-020-0737-y

107. ❸Engineered nanomedicines with enhanced tumor penetration, J. X. Ding, J. J. Chen, L. Q. Gao et al., Nano Today, 29 (2019) 100800. Cited: 122. https://doi.org/10.1016/j.nantod.2019.100800

108. ❷High entropy alloys: A focused review of mechanical properties and deformation mechanisms, E. P. George, W. A. Curtin, and C. C. Tasan, Acta Materialia, 188 (2020) 435. Cited: 122. https://doi.org/10.1016/j.actamat.2019.12.015

109. ❸Enabling High-Voltage Lithium-Metal Batteries under Practical Conditions, X. D. Ren, L. F. Zou, X. Cao et al., Joule, 3 (2019) 1662. Cited: 120. https://doi.org/10.1016/j.joule.2019.05.006

110. ❷Continuous production of pure liquid fuel solutions via electrocatalytic CO2 reduction using solid-electrolyte devices, C. Xia, P. Zhu, Q. Jiang et al., Nature Energy, 4 (2019) 776. Cited: 120. https://doi.org/10.1038/s41560-019-0451-x

111. ❷Toward Nanotechnology-Enabled Approaches against the COVID-19 Pandemic, C. Weiss, M. Carriere, L. Fusco et al., Acs Nano, 14 (2020) 6383. Cited: 120. https://doi.org/10.1021/acsnano.0c03697

112. ❷Atomic-level tuning of Co-N-C catalyst for high-performance electrochemical H2O2 production, E. Jung, H. Shin, B. H. Lee et al., Nature Materials, 19 (2020) 436. Cited: 119. https://doi.org/10.1038/s41563-019-0571-5

113. ❸Transition Metal Oxide Anodes for Electrochemical Energy Storage in Lithium- and Sodium-Ion Batteries, S. Fang, D. Bresser, and S. Passerini, Advanced Energy Materials, 10 (2020) 1902485. Cited: 118. https://doi.org/10.1002/aenm.201902485

114. ❷Ternary Organic Solar Cells with Efficiency >16.5% Based on Two Compatible Nonfullerene Acceptors, J. L. Song, C. Li, L. Zhu et al., Advanced Materials, 31 (2019) 1905645. Cited: 118. https://doi.org/10.1002/adma.201905645

115. A general Lewis acidic etching route for preparing MXenes with enhanced electrochemical performance in non-aqueous electrolyte, Y. B. Li, H. Shao, Z. F. Lin et al., Nature Materials, 19 (2020) 894. Cited: 118. https://doi.org/10.1038/s41563-020-0657-0

116. Bio-inspired hydrophobicity promotes CO2 reduction on a Cu surface, D. Wakerley, S. Lamaison, F. Ozanam et al., Nature Materials, 18 (2019) 1222. Cited: 116. https://doi.org/10.1038/s41563-019-0445-x

117. ❷Covalent-Organic Frameworks: Advanced Organic Electrode Materials for Rechargeable Batteries, T. Sun, J. Xie, W. Guo et al., Advanced Energy Materials, 10 (2020) 1904199. Cited: 116. https://doi.org/10.1002/aenm.201904199

118. ❸Massively Evoking Immunogenic Cell Death by Focused Mitochondrial Oxidative Stress using an AIE Luminogen with a Twisted Molecular Structure, C. Chen, X. Ni, S. R. Jia et al., Advanced Materials, 31 (2019) 1904914. Cited: 113. https://doi.org/10.1002/adma.201904914

119. ❷Recent Advances on Water-Splitting Electrocatalysis Mediated by Noble-Metal-Based Nanostructured Materials, Y. J. Li, Y. J. Sun, Y. N. Qin et al., Advanced Energy Materials, 10 (2020) 1903120. Cited: 113. https://doi.org/10.1002/aenm.201903120

120. ❷Self-Healing Hydrogels: The Next Paradigm Shift in Tissue Engineering?, S. Talebian, M. Mehrali, N. Taebnia et al., Advanced Science, 6 (2019) 1801664. Cited: 112. https://doi.org/10.1002/advs.201801664

121. Toward Flexible Surface-Enhanced Raman Scattering (SERS) Sensors for Point-of-Care Diagnostics, K. C. Xu, R. Zhou, K. Takei et al., Advanced Science, 6 (2019) 1900925. Cited: 110. https://doi.org/10.1002/advs.201900925

122. Recent Progress in Ferroptosis Inducers for Cancer Therapy, C. Liang, X. L. Zhang, M. S. Yang et al., Advanced Materials, 31 (2019) 1904197. Cited: 110. https://doi.org/10.1002/adma.201904197

123. Memory devices and applications for in-memory computing, A. Sebastian, M. Le Gallo, R. Khaddam-Aljameh et al., Nature Nanotechnology, 15 (2020) 529. Cited: 110. https://doi.org/10.1038/s41565-020-0655-z

124. A self-healable and highly flexible supercapacitor integrated by dynamically cross-linked electro-conductive hydrogels based on nanocellulose-templated carbon nanotubes embedded in a viscoelastic polymer network, J. Q. Han, H. X. Wang, Y. Y. Yue et al., Carbon, 149 (2019) 1. Cited: 108. https://doi.org/10.1016/j.carbon.2019.04.029

125. ❹Can N95 Respirators Be Reused after Disinfection? How Many Times?, L. Liao, W. Xiao, M. V. Zhao et al., Acs Nano, 14 (2020) 6348. Cited: 108. https://doi.org/10.1021/acsnano.0c03597

126. ❹Lightweight and robust rGO/sugarcane derived hybrid carbon foams with outstanding EMI shielding performance, L. Wang, X. T. Shi, J. L. Zhang et al., Journal of Materials Science & Technology, 52 (2020) 119. Cited: 108. https://doi.org/10.1016/j.jmst.2020.03.029

127. ❸Bipolar-shell resurfacing for blue LEDs based on strongly confined perovskite quantum dots, Y. T. Dong, Y. K. Wang, F. L. Yuan et al., Nature Nanotechnology, 15 (2020) 668. Cited: 108. https://doi.org/10.1038/s41565-020-0714-5

128. ❷Building ultraconformal protective layers on both secondary and primary particles of layered lithium transition metal oxide cathodes, G. L. Xu, Q. Liu, K. K. S. Lau et al., Nature Energy, 4 (2019) 484. Cited: 107. https://doi.org/10.1038/s41560-019-0387-1

129. ❷All-Small-Molecule Organic Solar Cells with an Ordered Liquid Crystalline Donor, H. Y. Chen, D. Q. Hu, Q. G. Yang et al., Joule, 3 (2019) 3034. Cited: 104. https://doi.org/10.1016/j.joule.2019.09.009

130. The Crown and the Scepter: Roles of the Protein Corona in Nanomedicine, R. Cai and C. Y. Chen, Advanced Materials, 31 (2019) 1805740. Cited: 103. https://doi.org/10.1002/adma.201805740

131. ❸Decoupling electrolytes towards stable and high-energy rechargeable aqueous zinc-manganese dioxide batteries, C. Zhong, B. Liu, J. Ding et al., Nature Energy, 5 (2020) 440. Cited: 103. https://doi.org/10.1038/s41560-020-0584-y

132. Renal clearable catalytic gold nanoclusters for in vivo disease monitoring, C. N. Loynachan, A. P. Soleimany, J. S. Dudani et al., Nature Nanotechnology, 14 (2019) 883. Cited: 102. https://doi.org/10.1038/s41565-019-0527-6

133. Boosting Zn-Ion Energy Storage Capability of Hierarchically Porous Carbon by Promoting Chemical Adsorption, H. Z. Zhang, Q. Y. Liu, Y. B. Fang et al., Advanced Materials, 31 (2019) 1904948. Cited: 101. https://doi.org/10.1002/adma.201904948

134. ❷Fluorinated Solid-Electrolyte Interphase in High-Voltage Lithium Metal Batteries, T. Li, X. Q. Zhang, P. Shi et al., Joule, 3 (2019) 2647. Cited: 100. https://doi.org/10.1016/j.joule.2019.09.022

135. Recent advances in zinc anodes for high-performance aqueous Zn-ion batteries, H. Jia, Z. Q. Wang, B. Tawiah et al., Nano Energy, 70 (2020) 104523. Cited: 100. https://doi.org/10.1016/j.nanoen.2020.104523

136. ❷Electrolyte design for LiF-rich solid-electrolyte interfaces to enable high-performance microsized alloy anodes for batteries, J. Chen, X. L. Fan, Q. Li et al., Nature Energy, 5 (2020) 386. Cited: 100. https://doi.org/10.1038/s41560-020-0601-1

137. ❷Review on spintronics: Principles and device applications, A. Hirohata, K. Yamada, Y. Nakatani et al., Journal of Magnetism and Magnetic Materials, 509 (2020) 166711. Cited: 100. https://doi.org/10.1016/j.jmmm.2020.166711

138. ❷Deep Learning: A Rapid and Efficient Route to Automatic Metasurface Design, T. S. Qiu, X. Shi, J. F. Wang et al., Advanced Science, 6 (2019) 1900128. Cited: 99. https://doi.org/10.1002/advs.201900128

139. ❷Lithium-Metal Growth Kinetics on LLZO Garnet-Type Solid Electrolytes, T. Krauskopf, R. Dippel, H. Hartmann et al., Joule, 3 (2019) 2030. Cited: 99. https://doi.org/10.1016/j.joule.2019.06.013

140. ❷Photo-Rechargeable Fabrics as Sustainable and Robust Power Sources for Wearable Bioelectronics, N. N. Zhang, F. Huang, S. L. Zhao et al., Matter, 2 (2020) 1260. Cited: 98. https://doi.org/10.1016/j.matt.2020.01.022

141. ❸Light-driven methane dry reforming with single atomic site antenna-reactor plasmonic photocatalysts, L. A. Zhou, J. M. P. Martirez, J. Finzel et al., Nature Energy, 5 (2020) 61. Cited: 97. https://doi.org/10.1038/s41560-019-0517-9

142. ❷A Flexible and Lightweight Biomass-Reinforced Microwave Absorber, Y. Cheng, J. Z. Y. Seow, H. Q. Zhao et al., Nano-Micro Letters, 12 (2020) 125. Cited: 95. https://doi.org/10.1007/s40820-020-00461-x

143. ❷A review on synthesis of graphene, h-BN and MoS2 for energy storage applications: Recent progress and perspectives, R. Kumar, S. Sahoo, E. Joanni et al., Nano Research, 12 (2019) 2655. Cited: 94. https://doi.org/10.1007/s12274-019-2467-8

144. Sodium/Potassium-Ion Batteries: Boosting the Rate Capability and Cycle Life by Combining Morphology, Defect and Structure Engineering, H. J. Huang, R. Xu, Y. Z. Feng et al., Advanced Materials, 32 (2020) 1904320. Cited: 92. https://doi.org/10.1002/adma.201904320

145. ❷Six-junction III-V solar cells with 47.1% conversion efficiency under 143 Suns concentration, J. F. Geisz, R. M. France, K. L. Schulte et al., Nature Energy, 5 (2020) 326. Cited: 92. https://doi.org/10.1038/s41560-020-0598-5

146. ❸Single-atom catalysis enables long-life, high-energy lithium-sulfur batteries, Z. H. Zhuang, Q. Kang, D. S. Wang et al., Nano Research, 13 (2020) 1856. Cited: 92. https://doi.org/10.1007/s12274-020-2827-4

147. ❹Self-healing conductive hydrogels: preparation, properties and applications, Z. X. Deng, H. Wang, P. X. Ma et al., Nanoscale, 12 (2020) 1224. Cited: 91. https://doi.org/10.1039/c9nr09283h

148. ❷Current status and future directions of multivalent metal-ion batteries, Y. L. Liang, H. Dong, D. Aurbach et al., Nature Energy, 5 (2020) 646. Cited: 90. https://doi.org/10.1038/s41560-020-0655-0

149. ❸Processing parameters in laser powder bed fusion metal additive manufacturing, J. P. Oliveira, A. D. LaLonde, and J. Ma, Materials & Design, 193 (2020) 108762. Cited: 90. https://doi.org/10.1016/j.matdes.2020.108762

150. Tuning the interlayer spacing of graphene laminate films for efficient pore utilization towards compact capacitive energy storage, Z. N. Li, S. Gadipelli, H. C. Li et al., Nature Energy, 5 (2020) 160. Cited: 89. https://doi.org/10.1038/s41560-020-0560-6

151. Scalable Manufacturing of Free-Standing, Strong Ti3C2Tx MXene Films with Outstanding Conductivity, J. Z. Zhang, N. Kong, S. Uzun et al., Advanced Materials, 32 (2020) 2001093. Cited: 87. https://doi.org/10.1002/adma.202001093

152. ❷Environment-Stable CoxNiy Encapsulation in Stacked Porous Carbon Nanosheets for Enhanced Microwave Absorption, X. H. Liang, Z. M. Man, B. Quan et al., Nano-Micro Letters, 12 (2020) 102. Cited: 87. https://doi.org/10.1007/s40820-020-00432-2

153. ❷Correlated electronic phases in twisted bilayer transition metal dichalcogenides, L. Wang, E. M. Shih, A. Ghiotto et al., Nature Materials, 19 (2020) 861. Cited: 87. https://doi.org/10.1038/s41563-020-0708-6

154. ❷Review on the research progress of cement-based and geopolymer materials modified by graphene and graphene oxide, C. J. Liu, X. C. Huang, Y. Y. Wu et al., Nanotechnology Reviews, 9 (2020) 155. Cited: 86. https://doi.org/10.1515/ntrev-2020-0014

155. ❷A Sieve-Functional and Uniform-Porous Kaolin Layer toward Stable Zinc Metal Anode, C. B. Deng, X. S. Xie, J. W. Han et al., Advanced Functional Materials, 30 (2020) 2000599. Cited: 86. https://doi.org/10.1002/adfm.202000599

156. Recent Advances for MOF-Derived Carbon-Supported Single-Atom Catalysts, A. J. Han, B. Q. Wang, A. Kumar et al., Small Methods, 3 (2019) 1800471. Cited: 85. https://doi.org/10.1002/smtd.201800471

157. Design of low bandgap tin-lead halide perovskite solar cells to achieve thermal, atmospheric and operational stability, R. Prasanna, T. Leijtens, S. P. Dunfield et al., Nature Energy, 4 (2019) 939. Cited: 85. https://doi.org/10.1038/s41560-019-0471-6

158. ❷New Strategies for Defect Passivation in High-Efficiency Perovskite Solar Cells, S. Akin, N. Arora, S. M. Zakeeruddin et al., Advanced Energy Materials, 10 (2020) 1903090. Cited: 85. https://doi.org/10.1002/aenm.201903090

159. ❷A Novel Transfer Learning Based Approach for Pneumonia Detection in Chest X-ray Images, V. Chouhan, S. K. Singh, A. Khamparia et al., Applied Sciences-Basel, 10 (2020) 559. Cited: 84. https://doi.org/10.3390/app10020559

160. ❸Continuous Carbon Dioxide Electroreduction to Concentrated Multi-carbon Products Using a Membrane Electrode Assembly, C. M. Gabardo, C. P. O'Brien, J. P. Edwards et al., Joule, 3 (2019) 2777. Cited: 83. https://doi.org/10.1016/j.joule.2019.07.021

161. Flexible, Robust, and Multifunctional Electromagnetic Interference Shielding Film with Alternating Cellulose Nanofiber and MXene Layers, B. Zhou, Z. Zhang, Y. L. Li et al., Acs Applied Materials & Interfaces, 12 (2020) 4895. Cited: 82. https://doi.org/10.1021/acsami.9b19768

162. Heteroatom-Mediated Interactions between Ruthenium Single Atoms and an MXene Support for Efficient Hydrogen Evolution, V. Ramalingam, P. Varadhan, H. C. Fu et al., Advanced Materials, 31 (2019) 1903841. Cited: 81. https://doi.org/10.1002/adma.201903841

163. Adsorption-Catalysis Design in the Lithium-Sulfur Battery, M. Zhang, W. Chen, L. X. Xue et al., Advanced Energy Materials, 10 (2020) 1903008. Cited: 81. https://doi.org/10.1002/aenm.201903008

164. Tailored Amphiphilic Molecular Mitigators for Stable Perovskite Solar Cells with 23.5% Efficiency, H. W. Zhu, Y. H. Liu, F. T. Eickemeyer et al., Advanced Materials, 32 (2020) 1907757. Cited: 80. https://doi.org/10.1002/adma.201907757

165. Self-healing polymers, S. Y. Wang and M. W. Urban, Nature Reviews Materials, 5 (2020) 562. Cited: 80. https://doi.org/10.1038/s41578-020-0202-4

166. Electromagnetic Shielding of Monolayer MXene Assemblies, T. Yun, H. Kim, A. Iqbal et al., Advanced Materials, 32 (2020) 1906769. Cited: 78. https://doi.org/10.1002/adma.201906769

167. ❷Metal halide perovskites for light-emitting diodes, X. K. Liu, W. D. Xu, S. Bai et al., Nature Materials, 20 (2021) 10. Cited: 78. https://doi.org/10.1038/s41563-020-0784-7

168. ❷Facet-dependent active sites of a single Cu2O particle photocatalyst for CO2 reduction to methanol, Y. A. Wu, I. McNulty, C. Liu et al., Nature Energy, 4 (2019) 957. Cited: 77. https://doi.org/10.1038/s41560-019-0490-3

169. ❷Gradient Li-rich oxide cathode particles immunized against oxygen release by a molten salt treatment, Z. Zhu, D. W. Yu, Y. Yang et al., Nature Energy, 4 (2019) 1049. Cited: 76. https://doi.org/10.1038/s41560-019-0508-x

170. ❷Molecular design for electrolyte solvents enabling energy-dense and long-cycling lithium metal batteries, Z. Yu, H. S. Wang, X. Kong et al., Nature Energy, 5 (2020) 526. Cited: 76. https://doi.org/10.1038/s41560-020-0634-5

171. ❷Controlling N-doping type in carbon to boost single-atom site Cu catalyzed transfer hydrogenation of quinoline, J. Zhang, C. Y. Zheng, M. L. Zhang et al., Nano Research, 13 (2020) 3082. Cited: 75. https://doi.org/10.1007/s12274-020-2977-4

172. ❸Imaging nano-defects of metal waveguides using the microwave cavity interference enhancement method, H. Guo, X. Li, Q. Zhu et al., Nanotechnology, 31 (2020) 455203. Cited: 75. https://doi.org/10.1088/1361-6528/abaa74

173. Bimolecular Additives Improve Wide-Band-Gap Perovskites for Efficient Tandem Solar Cells with CIGS, D. H. Kim, C. P. Muzzillo, J. H. Tong et al., Joule, 3 (2019) 1734. Cited: 74. https://doi.org/10.1016/j.joule.2019.04.012

174. A compact inorganic layer for robust anode protection in lithium-sulfur batteries, Y. X. Yao, X. Q. Zhang, B. Q. Li et al., Infomat, 2 (2020) 379. Cited: 73. https://doi.org/10.1002/inf2.12046

175. ❷The NOx Degradation Performance of Nano-TiO2 Coating for Asphalt Pavement, H. N. Yu, W. Dai, G. P. Qian et al., Nanomaterials, 10 (2020) 897. Cited: 72. https://doi.org/10.3390/nano10050897

176. ❷Lead-free tin-halide perovskite solar cells with 13% efficiency, K. Nishimura, M. A. Kamarudin, D. Hirotani et al., Nano Energy, 74 (2020) 104858. Cited: 72. https://doi.org/10.1016/j.nanoen.2020.104858

177. Self-Assembled Monolayer Enables Hole Transport Layer-Free Organic Solar Cells with 18% Efficiency and Improved Operational Stability, Y. B. Lin, Y. Firdaus, F. H. Isikgor et al., Acs Energy Letters, 5 (2020) 2935. Cited: 72. https://doi.org/10.1021/acsenergylett.0c01421

178. Red-Carbon-Quantum-Dot-Doped SnO2 Composite with Enhanced Electron Mobility for Efficient and Stable Perovskite Solar Cells, W. Hui, Y. G. Yang, Q. Xu et al., Advanced Materials, 32 (2020) 1906374. Cited: 71. https://doi.org/10.1002/adma.201906374

179. ❷Understanding and applying coulombic efficiency in lithium metal batteries, J. Xiao, Q. Y. Li, Y. J. Bi et al., Nature Energy, 5 (2020) 561. Cited: 71. https://doi.org/10.1038/s41560-020-0648-z

180. A Roadmap to the Ammonia Economy, D. R. MacFarlane, P. V. Cherepanov, J. Choi et al., Joule, 4 (2020) 1186. Cited: 70. https://doi.org/10.1016/j.joule.2020.04.004

181. ❷Achieving 17.4% Efficiency of Ternary Organic Photovoltaics with Two Well-Compatible Nonfullerene Acceptors for Minimizing Energy Loss, X. L. Ma, J. Wang, J. H. Gao et al., Advanced Energy Materials, 10 (2020) 2001404. Cited: 70. https://doi.org/10.1002/aenm.202001404

182. ❸Flame retardant polymeric nanocomposites through the combination of nanomaterials and conventional flame retardants, W. T. He, P. A. Song, B. Yu et al., Progress in Materials Science, 114 (2020) 100687. Cited: 70. https://doi.org/10.1016/j.pmatsci.2020.100687

183. ❸Selective laser melting of near-alpha titanium alloy Ti-6Al-2Zr-1Mo-1V: Parameter optimization, heat treatment and mechanical performance, C. Cai, X. Wu, W. Liu et al., Journal of Materials Science & Technology, 57 (2020) 51. Cited: 70. https://doi.org/10.1016/j.jmst.2020.05.004

184. Additively manufactured carbon fiber-reinforced composites: State of the art and perspective, N. van de Werken, H. Tekinalp, P. Khanbolouki et al., Additive Manufacturing, 31 (2020) 100962. Cited: 69. https://doi.org/10.1016/j.addma.2019.100962

185. A Layer-by-Layer Architecture for Printable Organic Solar Cells Overcoming the Scaling Lag of Module Efficiency, R. Sun, Q. Wu, J. Guo et al., Joule, 4 (2020) 407. Cited: 69. https://doi.org/10.1016/j.joule.2019.12.004

186. ❷Realizing high zinc reversibility in rechargeable batteries, L. Ma, M. A. Schroeder, O. Borodin et al., Nature Energy, 5 (2020) 743. Cited: 69. https://doi.org/10.1038/s41560-020-0674-x

187. ❷Iron-based phosphides as electrocatalysts for the hydrogen evolution reaction: recent advances and future prospects, S. R. Xu, H. T. Zhao, T. S. Li et al., Journal of Materials Chemistry A, 8 (2020) 19729. Cited: 69. https://doi.org/10.1039/d0ta05628f

188. ❸CCGPA-MPPT: Cauchy preferential crossover-based global pollination algorithm for MPPT in photovoltaic system, V. Sundararaj, V. Anoop, P. Dixit et al., Progress in Photovoltaics, 28 (2020) 1128. Cited: 68. https://doi.org/10.1002/pip.3315

189. ❷Recent progress on control strategies for inherent issues in friction stir welding, X. C. Meng, Y. X. Huang, J. Cao et al., Progress in Materials Science, 115 (2021) 100706. Cited: 68. https://doi.org/10.1016/j.pmatsci.2020.100706

190. Efficient electrically powered CO2-to-ethanol via suppression of deoxygenation, X. Wang, Z. Y. Wang, F. P. G. de Arquer et al., Nature Energy, 5 (2020) 478. Cited: 67. https://doi.org/10.1038/s41560-020-0607-8

191. ❷Manipulating Relative Permittivity for High-Performance Wearable Triboelectric Nanogenerators, L. Jin, X. Xiao, W. L. Deng et al., Nano Letters, 20 (2020) 6404. Cited: 67. https://doi.org/10.1021/acs.nanolett.0c01987

192. All-perovskite tandem solar cells with 24.2% certified efficiency and area over 1 cm(2)using surface-anchoring zwitterionic antioxidant, K. Xiao, R. X. Lin, Q. L. Han et al., Nature Energy, 5 (2020) 870. Cited: 67. https://doi.org/10.1038/s41560-020-00705-5

193. 17.1% Efficient Single-Junction Organic Solar Cells Enabled by n-Type Doping of the Bulk-Heterojunction, Y. B. Lin, Y. Firdaus, M. I. Nugraha et al., Advanced Science, 7 (2020) 1903419. Cited: 66. https://doi.org/10.1002/advs.201903419

194. Beyond Doping and Coating: Prospective Strategies for Stable High-Capacity Layered Ni-Rich Cathodes, H. H. Sun, H. H. Ryu, U. H. Kim et al., Acs Energy Letters, 5 (2020) 1136. Cited: 66. https://doi.org/10.1021/acsenergylett.0c00191

195. ❸An sp-hybridized all-carboatomic ring, cyclo 18 carbon: Electronic structure, electronic spectrum, and optical nonlinearity, Z. Y. Liu, T. Lu, and Q. X. Chen, Carbon, 165 (2020) 461. Cited: 65. https://doi.org/10.1016/j.carbon.2020.05.023

196. Manganese oxidation as the origin of the anomalous capacity of Mn-containing Li-excess cathode materials, M. D. Radin, J. Vinckeviciute, R. Seshadri et al., Nature Energy, 4 (2019) 639. Cited: 64. https://doi.org/10.1038/s41560-019-0439-6

197. NIR Light-Driving Barrier-Free Group Rotation in Nanoparticles with an 88.3% Photothermal Conversion Efficiency for Photothermal Therapy, D. M. Xi, M. Xiao, J. F. Cao et al., Advanced Materials, 32 (2020) 1907855. Cited: 64. https://doi.org/10.1002/adma.201907855

198. ❷Structure design of MoS2@Mo2C on nitrogen-doped carbon for enhanced alkaline hydrogen evolution reaction, L. N. Jia, B. T. Liu, Y. R. Zhao et al., Journal of Materials Science, 55 (2020) 16197. Cited: 64. https://doi.org/10.1007/s10853-020-05107-2

199. Battery Lifetime Prognostics, X. S. Hu, L. Xu, X. K. Lin et al., Joule, 4 (2020) 310. Cited: 63. https://doi.org/10.1016/j.joule.2019.11.018

200. Defect Engineering in Manganese-Based Oxides for Aqueous Rechargeable Zinc-Ion Batteries: A Review, T. Xiong, Y. X. Zhang, W. S. V. Lee et al., Advanced Energy Materials, 10 (2020) 2001769. Cited: 63. https://doi.org/10.1002/aenm.202001769

201. ❷Harmonizing self-supportive VN/MoS2 pseudocapacitance core-shell electrodes for boosting the areal capacity of lithium storage, T. Xiong, H. Su, F. Yang et al., Materials Today Energy, 17 (2020) 100461. Cited: 63. https://doi.org/10.1016/j.mtener.2020.100461

202. ❷Recent progress on hybrid electrocatalysts for efficient electrochemical CO2 reduction, B. H. Zhang, Y. Z. Jiang, M. X. Gao et al., Nano Energy, 80 (2021) 105504. Cited: 63. https://doi.org/10.1016/j.nanoen.2020.105504

203. ❷Heteroatom doped graphene engineering for energy storage and conversion, R. Kumar, S. Sahoo, E. Joanni et al., Materials Today, 39 (2020) 47. Cited: 62. https://doi.org/10.1016/j.mattod.2020.04.010

204. Tunable nanophotonics enabled by chalcogenide phase-change materials, S. Abdollahramezani, O. Hemmatyar, H. Taghinejad et al., Nanophotonics, 9 (2020) 1189. Cited: 61. https://doi.org/10.1515/nanoph-2020-0039

205. Hydrothermal deposition of antimony selenosulfide thin films enables solar cells with 10% efficiency, R. F. Tang, X. M. Wang, W. T. Lian et al., Nature Energy, 5 (2020) 587. Cited: 61. https://doi.org/10.1038/s41560-020-0652-3

206. Structural transformation of highly active metal-organic framework electrocatalysts during the oxygen evolution reaction, S. L. Zhao, C. H. Tan, C. T. He et al., Nature Energy, 5 (2020) 881. Cited: 61. https://doi.org/10.1038/s41560-020-00709-1

207. Metal chalcogenides for potassium storage, J. W. Zhou, Y. Liu, S. L. Zhang et al., Infomat, 2 (2020) 437. Cited: 60. https://doi.org/10.1002/inf2.12101

208. Structure Architecting for Salt-Rejecting Solar Interfacial Desalination to Achieve High-Performance Evaporation With In Situ Energy Generation, Y. X. Zhang, T. Xiong, D. K.

Nandakumar et al., Advanced Science, 7 (2020) 1903478. Cited: 59. https://doi.org/10.1002/advs.201903478

209. Conjugated Organic Cations Enable Efficient Self-Healing FASnI(3) Solar Cells, C. X. Ran, W. Y. Gao, J. R. Li et al., Joule, 3 (2019) 3072. Cited: 58. https://doi.org/10.1016/j.joule.2019.08.023

210. Metal-Organic Framework Nanocarriers for Drug Delivery in Biomedical Applications, Y. J. Sun, L. W. Zheng, Y. Yang et al., Nano-Micro Letters, 12 (2020) 103. Cited: 58. https://doi.org/10.1007/s40820-020-00423-3

211. ❷Highly Efficient Thermally Co-evaporated Perovskite Solar Cells and Mini-modules, J. Li, H. Wang, X. Y. Chin et al., Joule, 4 (2020) 1035. Cited: 58. https://doi.org/10.1016/j.joule.2020.03.005

212. Developing a high-strength Al-Mg-Si-Sc-Zr alloy for selective laser melting: Crack-inhibiting and multiple strengthening mechanisms, R. D. Li, M. B. Wang, Z. M. Li et al., Acta Materialia, 193 (2020) 83. Cited: 57. https://doi.org/10.1016/j.actamat.2020.03.060

213. ❸Self-assembling anchored film basing on two tetrazole derivatives for application to protect copper in sulfuric acid environment, Y. J. Qiang, H. Li, and X. J. Lan, Journal of Materials Science & Technology, 52 (2020) 63. Cited: 57. https://doi.org/10.1016/j.jmst.2020.04.005

214. ❷COVID-19 Vaccine Frontrunners and Their Nanotechnology Design, Y. H. Chung, V. Beiss, S. N. Fiering et al., Acs Nano, 14 (2020) 12522. Cited: 57. https://doi.org/10.1021/acsnano.0c07197

215. Z-Scheme Photocatalytic Systems for Solar Water Splitting, B. J. Ng, L. K. Putri, X. Y. Kong et al., Advanced Science, 7 (2020) 1903171. Cited: 56. https://doi.org/10.1002/advs.201903171

216. ❷Single-atom site catalysts for environmental catalysis, N. Q. Zhang, C. L. Ye, H. Yan et al., Nano Research, 13 (2020) 3165. Cited: 56. https://doi.org/10.1007/s12274-020-2994-3

217. Bonding behavior between reactive powder concrete and normal strength concrete, Y. Z. Ju, T. Shen, and D. H. Wang, Construction and Building Materials, 242 (2020) 118024. Cited: 55. https://doi.org/10.1016/j.conbuildmat.2020.118024

218. ❷A review on 2D MoS2 cocatalysts in photocatalytic H-2 production, Z. Z. Liang, R. C. Shen, Y. H. Ng et al., Journal of Materials Science & Technology, 56 (2020) 89. Cited: 55. https://doi.org/10.1016/j.jmst.2020.04.032

219. ❷Automatically Processing IFC Clipping Representation for BIM and GIS Integration at the Process Level, J. X. Zhu, P. Wu, M. C. Chen et al., Applied Sciences-Basel, 10 (2020) 2009. Cited: 54. https://doi.org/10.3390/app10062009

220. Hydrogen-Substituted Graphdiyne Ion Tunnels Directing Concentration Redistribution for Commercial-Grade Dendrite-Free Zinc Anodes, Q. Yang, Y. Guo, B. X. Yan et al., Advanced Materials, 32 (2020) 2001755. Cited: 53. https://doi.org/10.1002/adma.202001755

221. ❷Evaluation of phosphorus slag (PS) content and particle size on the performance modification effect of asphalt, H. N. Yu, X. Zhu, G. P. Qian et al., Construction and Building Materials, 256 (2020) 119334. Cited: 53. https://doi.org/10.1016/j.conbuildmat.2020.119334

222. Hierarchical composite of biomass derived magnetic carbon framework and phytic acid doped polyanilne with prominent electromagnetic wave absorption capacity, T. Q. Hou, Z. R. Jia, A. L. Feng et al., Journal of Materials Science & Technology, 68 (2021) 61. Cited: 53. https://doi.org/10.1016/j.jmst.2020.06.046

223. Friction stir welding/processing of metals and alloys: A comprehensive review on microstructural evolution, A. Heidarzadeh, S. Mironov, R. Kaibyshev et al., Progress in Materials Science, 117 (2021) 100752. Cited: 53. https://doi.org/10.1016/j.pmatsci.2020.100752

224. ❷Numerical Study on Hysteretic Behaviour of Horizontal-Connection and Energy-Dissipation Structures Developed for Prefabricated Shear Walls, L. M. Zhu, L. M. Kong, and C. W. Zhang, Applied Sciences-Basel, 10 (2020) 1240. Cited: 52. https://doi.org/10.3390/app10041240

225. Swing Vibration Control of Suspended Structure Using Active Rotary Inertia Driver System: Parametric Analysis and Experimental Verification, C. W. Zhang and H. Wang, Applied Sciences-Basel, 9 (2019) 3144. Cited: 51. https://doi.org/10.3390/app9153144

226. Nanoparticles-based magnetic and photo induced hyperthermia for cancer treatment, S. K. Sharma, N. Shrivastava, F. Rossi et al., Nano Today, 29 (2019) 100795. Cited: 51. https://doi.org/10.1016/j.nantod.2019.100795

227. Adding a Third Component with Reduced Miscibility and Higher LUMO Level Enables Efficient Ternary Organic Solar Cells, R. J. Ma, T. Liu, Z. H. Luo et al., Acs Energy Letters, 5 (2020) 2711. Cited: 50. https://doi.org/10.1021/acsenergylett.0c01364

228. The success story of graphite as a lithium-ion anode material - fundamentals, remaining challenges, and recent developments including silicon (oxide) composites, J. Asenbauer, T. Eisenmann, M. Kuenzel et al., Sustainable Energy & Fuels, 4 (2020) 5387. Cited: 50. https://doi.org/10.1039/d0se00175a

229. Local Crystal Misorientation Influences Non-radiative Recombination in Halide Perovskites, S. Jariwala, H. Y. Sun, G. W. P. Adhyaksa et al., Joule, 3 (2019) 3048. Cited: 49. https://doi.org/10.1016/j.joule.2019.09.001

230. Highly selective electrocatalytic CO(2)reduction to ethanol by metallic clusters dynamically formed from atomically dispersed copper, H. P. Xu, D. Rebollar, H. Y. He et al., Nature Energy, 5 (2020) 623. Cited: 49. https://doi.org/10.1038/s41560-020-0666-x

231. Carbazole isomers induce ultralong organic phosphorescence, C. J. Chen, Z. G. Chi, K. C. Chong et al., Nature Materials, 20 (2021) 175. Cited: 49. https://doi.org/10.1038/s41563-020-0797-2

232. ❸Wearable triboelectric nanogenerators for biomechanical energy harvesting, Y. J. Zou, V. Raveendran, and J. Chen, Nano Energy, 77 (2020) 105303. Cited: 49. https://doi.org/10.1016/j.nanoen.2020.105303

233. Robustness of the Active Rotary Inertia Driver System for Structural Swing Vibration Control Subjected to Multi-Type Hazard Excitations, C. W. Zhang and H. Wang, Applied Sciences-Basel, 9 (2019) 4391. Cited: 48. https://doi.org/10.3390/app9204391

234. ❷Photoactivatable Protherapeutic Nanomedicine for Cancer, Y. Zhang, C. Xu, X. L. Yang et al., Advanced Materials, 32 (2020) 2002661. Cited: 48. https://doi.org/10.1002/adma.202002661

235. ❷A Fully Phase-Modulated Metasurface as An Energy-Controllable Circular Polarization Router, Y. Y. Yuan, S. Sun, Y. Chen et al., Advanced Science, 7 (2020) 2001437. Cited: 48. https://doi.org/10.1002/advs.202001437

236. ❷In situ deposition of pitaya-like Fe3O4@C magnetic microspheres on reduced graphene oxide nanosheets for electromagnetic wave absorber, H. X. Zhang, Z. R. Jia, A. L. Feng et al., Composites Part B-Engineering, 199 (2020) 108261. Cited: 48. https://doi.org/10.1016/j.compositesb.2020.108261

237. ❷Comparative study on 3D printing of polyamide 12 by selective laser sintering and multi jet fusion, C. Cai, W. S. Tey, J. Y. Chen et al., Journal of Materials Processing Technology, 288 (2021) 116882. Cited: 48. https://doi.org/10.1016/j.jmatprotec.2020.116882

238. Bandgap engineering of two-dimensional semiconductor materials, A. Chaves, J. G. Azadani, H. Alsalman et al., Npj 2d Materials and Applications, 4 (2020) 29. Cited: 47. https://doi.org/10.1038/s41699-020-00162-4

239. Hydrophobic multiscale cavities for high-performance and self-cleaning surface-enhanced Raman spectroscopy (SERS) sensing, X. F. Zhao, C. D. Liu, J. Yu et al., Nanophotonics, 9 (2020) 4761. Cited: 47. https://doi.org/10.1515/nanoph-2020-0454

240. ❷A critical review on semitransparent organic solar cells, Z. H. Hu, J. Wang, X. L. Ma et al., Nano Energy, 78 (2020) 105376. Cited: 47. https://doi.org/10.1016/j.nanoen.2020.105376

241. ❷Using Deep Learning to Detect Defects in Manufacturing: A Comprehensive Survey and Current Challenges, J. Yang, S. B. Li, Z. Wang et al., Materials, 13 (2020) 5755. Cited: 47. https://doi.org/10.3390/ma13245755

242. Rational Design of Two-Dimensional Transition Metal Carbide/Nitride (MXene) Hybrids and Nanocomposites for Catalytic Energy Storage and Conversion, K. R. G. Lim, A. D. Handoko,

S. K. Nemani et al., Acs Nano, 14 (2020) 10834. Cited: 47. https://doi.org/10.1021/acsnano.0c05482

243. Microstructure and nanoindentation creep behavior of CoCrFeMnNi high-entropy alloy fabricated by selective laser melting, Z. L. Xu, H. Zhang, W. H. Li et al., Additive Manufacturing, 28 (2019) 766. Cited: 46. https://doi.org/10.1016/j.addma.2019.06.012

244. Dendrites in Zn-Based Batteries, Q. Yang, Q. Li, Z. X. Liu et al., Advanced Materials, 32 (2020) 2001854. Cited: 46. https://doi.org/10.1002/adma.202001854

245. Short-range ordering and its effects on mechanical properties of high-entropy alloys, Y. Wu, F. Zhang, X. Y. Yuan et al., Journal of Materials Science & Technology, 62 (2021) 214. Cited: 46. https://doi.org/10.1016/j.jmst.2020.06.018

246. A holistic approach to interface stabilization for efficient perovskite solar modules with over 2,000-hour operational stability, Z. H. Liu, L. B. Qiu, L. K. Ono et al., Nature Energy, 5 (2020) 596. Cited: 45. https://doi.org/10.1038/s41560-020-0653-2

247. Organic Polymer Aerogel Derived N-doped Carbon Aerogel with Vacancies for Ultrahigh Microwave Absorption, P. B. Liu, S. Gao, C. Chen et al., Carbon, 169 (2020) 276. Cited: 45. https://doi.org/10.1016/j.carbon.2020.07.063

248. ❷Flexible, Transparent, and Conductive Ti3C2Tx MXene-Silver Nanowire Films with Smart Acoustic Sensitivity for High-Performance Electromagnetic Interference Shielding, W. Chen, L. X. Liu, H. B. Zhang et al., Acs Nano, 14 (2020) 16643. Cited: 45. https://doi.org/10.1021/acsnano.0c01635

249. From intrinsic dielectric loss to geometry patterns: Dual-principles strategy for ultrabroad band microwave absorption, B. Quan, W. H. Gu, J. Q. Sheng et al., Nano Research, 14 (2021) 1495. Cited: 44. https://doi.org/10.1007/s12274-020-3208-8

250. Molecular engineering of dispersed nickel phthalocyanines on carbon nanotubes for selective CO2 reduction, X. Zhang, Y. Wang, M. Gu et al., Nature Energy, 5 (2020) 684. Cited: 43. https://doi.org/10.1038/s41560-020-0667-9

251. Active Site Engineering in Porous Electrocatalysts, H. Chen, X. Liang, Y. P. Liu et al., Advanced Materials, 32 (2020) 2002435. Cited: 42. https://doi.org/10.1002/adma.202002435

252. SARS-CoV-2 RapidPlex: A Graphene-Based Multiplexed Telemedicine Platform for Rapid and Low-Cost COVID-19 Diagnosis and Monitoring, R. M. Torrente-Rodriguez, H. Lukas, J. B. Tu et al., Matter, 3 (2020) . Cited: 42. https://doi.org/10.1016/j.matt.2020.09.027

253. ❷Carbon hydrangeas with typical ionic liquid matched pores for advanced supercapacitors, Z. Y. Song, H. Duan, L. Miao et al., Carbon, 168 (2020) 499. Cited: 41. https://doi.org/10.1016/j.carbon.2020.07.004

254. Heteroatom-doped carbon-based materials for lithium and sodium ion batteries, Y. Yuan, Z. W. Chen, H. X. Yu et al., Energy Storage Materials, 32 (2020) 65. Cited: 41. https://doi.org/10.1016/j.ensm.2020.07.027

255. ❷Optimization of sodium hydroxide for securing high thermoelectric performance in polycrystalline Sn1-xSe via anisotropy and vacancy synergy, X. L. Shi, W. D. Liu, A. Y. Wu et al., Infomat, 2 (2020) 1201. Cited: 40. https://doi.org/10.1002/inf2.12057

256. Broadband polarization-insensitive and wide-angle solar energy absorber based on tungsten ring-disc array, Z. Yi, J. K. Li, J. C. Lin et al., Nanoscale, 12 (2020) 23077. Cited: 40. https://doi.org/10.1039/d0nr04502k

257. ❷Use of synergistic effects of the co-catalyst, p-n heterojunction, and porous structure for improvement of visible-light photocatalytic H-2 evolution in porous Ni2O3/Mn0.2Cd0.8S/Cu3P@Cu2S, D. F. Zhang, Y. X. Tang, X. X. Qiu et al., Journal of Alloys and Compounds, 845 (2020) 155569. Cited: 39. https://doi.org/10.1016/j.jallcom.2020.155569

258. Core-shell Ni@C encapsulated by N-doped carbon derived from nickel-organic polymer coordination composites with enhanced microwave absorption, P. B. Liu, S. Gao, Y. Wang et al., Carbon, 170 (2020) 503. Cited: 39. https://doi.org/10.1016/j.carbon.2020.08.043

259. Electro-optical properties of monolayer and bilayer boron-doped C3N: Tunable electronic structure via strain engineering and electric field, A. Bafekry, M. Yagmurcukardes, M. Shahrokhi et al., Carbon, 168 (2020) 220. Cited: 38. https://doi.org/10.1016/j.carbon.2020.06.082

260. Metal-organic polymer coordination materials derived Co/N-doped porous carbon composites for frequency-selective microwave absorption, P. B. Liu, S. Gao, Y. Wang et al., Composites Part B-Engineering, 202 (2020) 108406. Cited: 38. https://doi.org/10.1016/j.compositesb.2020.108406

261. Experimental Investigation on the Mechanical Properties of Curved Metallic Plate Dampers, J. Zheng, C. W. Zhang, and A. Q. Li, Applied Sciences-Basel, 10 (2020) 269. Cited: 37. https://doi.org/10.3390/app10010269

262. ❷Hot isostatic pressing of a near alpha-Ti alloy: Temperature optimization, microstructural evolution and mechanical performance evaluation, C. Cai, X. Y. Gao, Q. Teng et al., Materials Science and Engineering a-Structural Materials Properties Microstructure and Processing, 802 (2021) 140426. Cited: 37. https://doi.org/10.1016/j.msea.2020.140426

263. In Situ Construction of a LiF-Enriched Interface for Stable All-Solid-State Batteries and its Origin Revealed by Cryo-TEM, O. W. Sheng, J. H. Zheng, Z. J. Ju et al., Advanced Materials, 32 (2020) 2000223. Cited: 36. https://doi.org/10.1002/adma.202000223

264. First-cycle voltage hysteresis in Li-rich 3dcathodes associated with molecular O(2)trapped in the bulk, R. A. House, G. J. Rees, M. A. Perez-Osorio et al., Nature Energy, 5 (2020) 777. Cited: 36. https://doi.org/10.1038/s41560-020-00697-2

265. ❷Morphology-control synthesis of polyaniline decorative porous carbon with remarkable electromagnetic wave absorption capabilities, F. Zhang, W. Cui, B. B. Wang et al., Composites Part B-Engineering, 204 (2021) 108491. Cited: 36. https://doi.org/10.1016/j.compositesb.2020.108491

266. ❷Promoting charge separation resulting in ternary organic solar cells efficiency over 17.5%, Q. Ma, Z. R. Jia, L. Meng et al., Nano Energy, 78 (2020) 105272. Cited: 36. https://doi.org/10.1016/j.nanoen.2020.105272

267. Intrinsic high thermal conductive liquid crystal epoxy film simultaneously combining with excellent intrinsic self-healing performance, X. T. Yang, X. Zhong, J. L. Zhang et al., Journal of Materials Science & Technology, 68 (2021) 209. Cited: 36. https://doi.org/10.1016/j.jmst.2020.08.027

268. Hollow N-doped carbon polyhedra embedded Co and Mo2C nanoparticles for high-efficiency and wideband microwave absorption, W. H. Huang, X. X. Zhang, Y. N. Zhao et al., Carbon, 167 (2020) 19. Cited: 35. https://doi.org/10.1016/j.carbon.2020.05.073

269. Mixed-Ligand Strategy for the Construction of Photochromic Metal-Organic Frameworks Driven by Electron-Transfer Between Nonphotoactive Units, A. J. Liu, F. Xu, S. D. Han et al., Crystal Growth & Design, 20 (2020) 7350. Cited: 35. https://doi.org/10.1021/acs.cgd.0c01018

270. Magnetic porous N-doped carbon composites with adjusted composition and porous microstructure for lightweight microwave absorbers, P. B. Liu, S. Gao, Y. Wang et al., Carbon, 173 (2021) 655. Cited: 35. https://doi.org/10.1016/j.carbon.2020.11.043

271. Recent progress of chemodynamic therapy-induced combination cancer therapy, X. W. Wang, X. Y. Zhong, Z. Liu et al., Nano Today, 35 (2020) 100946. Cited: 32. https://doi.org/10.1016/j.nantod.2020.100946

272. Surface Engineering of Ambient-Air-Processed Cesium Lead Triiodide Layers for Efficient Solar Cells, S. M. Yoon, H. Min, J. B. Kim et al., Joule, 5 (2021) 183. Cited: 32. https://doi.org/10.1016/j.joule.2020.11.020

273. Approaching 16% Efficiency in All-Small-Molecule Organic Solar Cells Based on Ternary Strategy with a Highly Crystalline Acceptor, L. Nian, Y. Y. Kan, K. Gao et al., Joule, 4 (2020) 2223. Cited: 31. https://doi.org/10.1016/j.joule.2020.08.011

274. Binder free mesoporous Ag-doped Co3O4 nanosheets with outstanding cyclic stability and rate capability for advanced supercapacitor applications, M. Aadil, S. Zulfiqar, M. Shahid et al., Journal of Alloys and Compounds, 844 (2020) 156062. Cited: 30. https://doi.org/10.1016/j.jallcom.2020.156062

275. A Nano-Micro Engineering Nanofiber for Electromagnetic Absorber, Green Shielding and Sensor, M. Zhang, C. Han, W. Q. Cao et al., Nano-Micro Letters, 13 (2021) 27. Cited: 30. https://doi.org/10.1007/s40820-020-00552-9

276. A general strategy towards personalized nanovaccines based on fluoropolymers for post-surgical cancer immunotherapy, J. Xu, J. Lv, Q. Zhuang et al., Nature Nanotechnology, 15 (2020) 1043. Cited: 28. https://doi.org/10.1038/s41565-020-00781-4

277. Study on self-healing and corrosion resistance behaviors of functionalized carbon dot-intercalated graphene-based waterborne epoxy coating, Y. W. Ye, H. Chen, Y. J. Zou et al., Journal of Materials Science & Technology, 67 (2021) 226. Cited: 28. https://doi.org/10.1016/j.jmst.2020.06.023

278. The Fe Effect: A review unveiling the critical roles of Fe in enhancing OER activity of Ni and Co based catalysts, S. Anantharaj, S. Kundu, and S. Noda, Nano Energy, 80 (2021) 105514. Cited: 28. https://doi.org/10.1016/j.nanoen.2020.105514

279. Local hot charge density regulation: Vibration-free pyroelectric nanogenerator for effectively enhancing catalysis and in-situ surface enhanced Raman scattering monitoring, C. H. Li, S. C. Xu, J. Yu et al., Nano Energy, 81 (2021) 105585. Cited: 28. https://doi.org/10.1016/j.nanoen.2020.105585

280. ❷Emergence of skyrmionium in a two-dimensional CrGe(Se,Te)(3) Janus monolayer, Y. Zhang, C. S. Xu, P. Chen et al., Physical Review B, 102 (2020) 241107. Cited: 27. https://doi.org/10.1103/PhysRevB.102.241107

281. Multi-band and high-sensitivity perfect absorber based on monolayer graphene metamaterial, L. Y. Jiang, C. Yuan, Z. Y. Li et al., Diamond and Related Materials, 111 (2021) 108227. Cited: 25. https://doi.org/10.1016/j.diamond.2020.108227

282. Effect of C-S-Hs-PCE and sodium sulfate on the hydration kinetics and mechanical properties of cement paste, H. X. Li, Z. Xue, G. W. Liang et al., Construction and Building Materials, 266 (2021) 121096. Cited: 23. https://doi.org/10.1016/j.conbuildmat.2020.121096

283. Hydration, shrinkage, pore structure and fractal dimension of silica fume modified low heat Portland cement-based materials, L. Wang, M. M. Jin, Y. H. Wu et al., Construction and Building Materials, 272 (2021) 121952. Cited: 23. https://doi.org/10.1016/j.conbuildmat.2020.121952

284. Conductive Hydrogel- and Organohydrogel-Based Stretchable Sensors, Z. X. Wu, X. Yang, and J. Wu, Acs Applied Materials & Interfaces, 13 (2021) 2128. Cited: 22. https://doi.org/10.1021/acsami.0c21841

285. Ternary Organic Photovoltaic Cells Exhibiting 17.59% Efficiency with Two Compatible Y6 Derivations as Acceptor, X. L. Wang, Q. Q. Sun, J. H. Gao et al., Solar Rrl, 5 (2021) 2100007. Cited: 22. https://doi.org/10.1002/solr.202100007

286. Cobalt single atom site catalysts with ultrahigh metal loading for enhanced aerobic oxidation of ethylbenzene, Y. Xiong, W. M. Sun, Y. H. Han et al., Nano Research, 14 (2021) 2418. Cited: 21. https://doi.org/10.1007/s12274-020-3244-4
287. Quantitative study of the corrosion evolution and stress corrosion cracking of high strength aluminum alloys in solution and thin electrolyte layer containing Cl, L. W. Wang, J. M. Liang, H. Li et al., Corrosion Science, 178 (2021) 109076. Cited: 20. https://doi.org/10.1016/j.corsci.2020.109076
288. Potential immuno-nanomedicine strategies to fight COVID-19 like pulmonary infections, S. R. Bonam, N. G. Kotla, R. A. Bohara et al., Nano Today, 36 (2021) 101051. Cited: 20. https://doi.org/10.1016/j.nantod.2020.101051
289. Anti-rutting performance of the damping asphalt mixtures (DAMs) made with a high content of asphalt rubber (AR), J. D. Huang, J. Zhang, J. L. Ren et al., Construction and Building Materials, 271 (2021) 121878. Cited: 19. https://doi.org/10.1016/j.conbuildmat.2020.121878
290. Gradation Segregation Characteristic and Its Impact on Performance of Asphalt Mixture, H. N. Yu, M. Yang, G. P. Qian et al., Journal of Materials in Civil Engineering, 33 (2021) 4020478. Cited: 19. https://doi.org/10.1061/(ASCE)MT.1943-5533.0003535
291. One-step and facile synthesis of peptide-like poly(melphalan) nanodrug for cancer therapy, X. Y. Zhang, X. Duan, Y. Y. Hu et al., Nano Today, 37 (2021) 101098. Cited: 19. https://doi.org/10.1016/j.nantod.2021.101098
292. Facile self-templating synthesis of layered carbon with N, S dual doping for highly efficient sodium storage, J. B. Li, Z. B. Ding, L. K. Pan et al., Carbon, 173 (2021) 31. Cited: 18. https://doi.org/10.1016/j.carbon.2020.10.092
293. Improved properties, increased production, and the path to broad adoption of carbon nanotube fibers, L. W. Taylor, O. S. Dewey, R. J. Headrick et al., Carbon, 171 (2021) 689. Cited: 17. https://doi.org/10.1016/j.carbon.2020.07.058
294. Highly Sensitive Ultrathin Flexible Thermoplastic Polyurethane/Carbon Black Fibrous Film Strain Sensor with Adjustable Scaffold Networks, X. Wang, X. H. Liu, and D. W. Schubert, Nano-Micro Letters, 13 (2021) 64. Cited: 17. https://doi.org/10.1007/s40820-021-00592-9
295. Evaluation of workability and mechanical properties of asphalt binder and mixture modified with waste toner, J. D. Huang, G. S. Kumar, and Y. T. Sun, Construction and Building Materials, 276 (2021) 122230. Cited: 16. https://doi.org/10.1016/j.conbuildmat.2020.122230
296. Advances in piezotronic transistors and piezotronics, L. F. Wang and Z. L. Wang, Nano Today, 37 (2021) 101108. Cited: 16. https://doi.org/10.1016/j.nantod.2021.101108
297. Assessment of an Improved Three-Diode against Modified Two-Diode Patterns of MCS Solar Cells Associated with Soft Parameter Estimation Paradigms, A. S. Bayoumi, R. A. El-

Sehiemy, K. Mahmoud et al., Applied Sciences-Basel, 11 (2021) 1055. Cited: 14. https://doi.org/10.3390/app11031055

298. Recent Progress in Aptamer Discoveries and Modifications for Therapeutic Applications, S. J. Ni, Z. J. Zhuo, Y. F. Pan et al., Acs Applied Materials & Interfaces, 13 (2021) 9500. Cited: 14. https://doi.org/10.1021/acsami.0c05750

299. Optimal Harmonic Mitigation in Distribution Systems with Inverter Based Distributed Generation, A. S. Abbas, R. A. El-Sehiemy, A. Abou El-Ela et al., Applied Sciences-Basel, 11 (2021) 774. Cited: 12. https://doi.org/10.3390/app11020774

300. Machine learning for glass science and engineering: A review, H. Liu, Z. P. Fu, K. Yang et al., Journal of Non-Crystalline Solids, 557 (2021) 119419. Cited: 12. https://doi.org/10.1016/j.jnoncrysol.2019.04.039

301. Optimal Estimation of Proton Exchange Membrane Fuel Cells Parameter Based on Coyote Optimization Algorithm, A. Abaza, R. A. El-Sehiemy, K. Mahmoud et al., Applied Sciences-Basel, 11 (2021) 2052. Cited: 10. https://doi.org/10.3390/app11052052

302. Metal organic framework enhanced SPEEK/SPSF heterogeneous membrane for ion transport and energy conversion, X. L. Zhao, C. X. Lu, L. S. Yang et al., Nano Energy, 81 (2021) 105657. Cited: 8. https://doi.org/10.1016/j.nanoen.2020.105657

303. Synergetic effect of spatially separated dual co-catalyst for accelerating multiple conversion reaction in advanced lithium sulfur batteries, Z. X. Zhao, Z. L. Yi, H. J. Li et al., Nano Energy, 81 (2021) 105621. Cited: 8. https://doi.org/10.1016/j.nanoen.2020.105621