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Hot Papers in Web of Science for 2020 publications as listed below!**

Please refer to the Web of Science definition of [Hot Papers](#). (as of 11 Feb 2022)

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1. Global burden of 369 diseases and injuries in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019

By: ... ; Car, J (Car, Josip) ^[576,713] ; ...Car, LT (Car, Lorraine Tudor) ^[714] ; ...

[713] Nanyang Technol Univ, Ctr Populat Hlth Sci, Singapore, Singapore

[714] Nanyang Technol Univ, Lee Kong Chian Sch Med, Singapore

LANCET Volume: 396 Issue: 10258 Pages: 1204-1222 Published: OCT 17, 2020 Document Type: Article	Times Cited: 986 Hot Paper Highly Cited Paper
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2. Present and Future of Surface-Enhanced Raman Scattering

By: ... ; Lee, HK (Lee, Hiang Kwee) ^[35,36] ; ...Ling, XY (Ling, Xing Yi) ^[35] ; ...

[35] Nanyang Technol Univ, Sch Phys & Math Sci, Div Chem & Biol Chem, Singapore

ACS NANO Volume: 14 Pages: 28-117 DOI: 10.1021/acsnano.9b04224 Published: JAN 2020 Document Type: Review	Times Cited: 732 Hot Paper Highly Cited Paper
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3. Global burden of 87 risk factors in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019

By: ... ; Car, LT (Car, Lorraine Tudor) ^[466] ; ...

[466] Nanyang Technol Univ, Lee Kong Chian Sch Med, Singapore

LANCET Volume: 396 Issue: 10258 Pages: 1223-1249 DOI: 10.1016/S0140-6736(20)30752-2 Published: OCT 17, 2020 Document Type: Article	Times Cited: 492 Hot Paper Highly Cited Paper
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4. How mental health care should change as a consequence of the COVID-19 pandemic

By: ...; [Lee, J](#) (Lee, Jimmy) ^[24,25]; ...

[25] Nanyang Technol Univ, Lee Kong Chian Sch Med, Neurosci & Mental Hlth, Singapore

LANCET PSYCHIATRY Volume: 7 Issue: 9 Pages: 813-824 DOI: 10.1016/S2215-0366(20)30307-2 Published: SEP 2020 Document Type: Article	Times Cited: 371 Hot Paper Highly Cited Paper
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5. A review on fundamentals for designing oxygen evolution electrocatalysts

By: [Song, JJ](#) (Song, Jiajia) ^[1,2,3]; [Wei, C](#) (Wei, Chao) ^[2,4]; [Huang, ZF](#) (Huang, Zhen-Feng) ^[5]; ... [Wang, X](#) (Wang, Xin) ^[5]; [Xu, ZCJ](#) (Xu, Zhichuan J.) ^[2,8]

[2] Nanyang Technol Univ, Sch Mat Sci & Engr, Singapore

[5] Nanyang Technol Univ, Sch Chem & Biomed Engr, Singapore

[8] Nanyang Technol Univ, ERI@N, Interdisciplinary Grad Sch, Singapore

CHEMICAL SOCIETY REVIEWS Volume: 49 Issue: 7 Pages: 2196-2214 DOI: 10.1039/c9cs00607a Published: APR 7, 2020 Document Type: Review	Times Cited: 363 Hot Paper Highly Cited Paper
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6. Detection of air and surface contamination by SARS-CoV-2 in hospital rooms of infected patients

By: ...; [Schuster, S](#) (Schuster, Stephan) ^[10]; ...

[10] Nanyang Technol Univ, Singapore Ctr Environm Life Sci Engr, Singapore, Singapore

NATURE COMMUNICATIONS Volume: 11 Issue: 1 Pages: DOI: 10.1038/s41467-020-16670-2 Published: MAY 29 2020 Document Type: Article	Times Cited: 348 Hot Paper Highly Cited Paper
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7. **A SARS-CoV-2 surrogate virus neutralization test based on antibody-mediated blockage of ACE2-spike protein-protein interaction**

By: ...; [Young, BE](#) (Young, Barnaby E.) ^{[3], [7], [8]}; [Lye, DC](#) (Lye, David C.) ^{[3], [7], [8], [11]};...

[8] Nanyang Technol Univ, Lee Kong Chian Sch Med, Singapore, Singapore

NATURE BIOTECHNOLOGY Volume: 38 Issue: 9 Pages: 1073-+ DOI: 10.1038/s41587-020-0631-z Published: SEP 2020 Document Type: Article	Times Cited: 311 Hot Paper Highly Cited Paper
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8. **Exceptional performance of hierarchical Ni-Fe oxyhydroxide@NiFe alloy nanowire array electrocatalysts for large current density water splitting**

By: ...; [Zhang, YQ](#) (Zhang, Yongqi) ^[2]; ... [Fan, HJ](#) (Fan, Hong Jin) ^[2] ; ...

[2] Nanyang Technol Univ, Sch Phys & Math Sci, Singapore

ENERGY & ENVIRONMENTAL SCIENCE Volume: 13 Issue: 1 Pages: 86-95 DOI: 10.1039/c9ee02388g Published: JAN 1, 2020 Document Type: Article	Times Cited: 255 Hot Paper Highly Cited Paper
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9. **Non-Noble-Metal-Based Electrocatalysts toward the Oxygen Evolution Reaction**

By: [Wu, ZP](#) (Wu, Zhi-Peng) ^{[1], [2]}; [Lu, XF](#) (Lu, Xue Feng) ^[1]; ...; [Lou, XW](#) (Lou, Xiong Wen (David)) ^[1]

[1] Nanyang Technol Univ, Sch Chem & Biomed Engr, 62 Nanyang Dr, Singapore 637459, Singapore

ADVANCED FUNCTIONAL MATERIALS Volume: 30 Issue: 15 Pages: DOI: 10.1002/adfm.201910274 Published: APR 2020 Document Type: Review	Times Cited: 252 Hot Paper Highly Cited Paper
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10. Advanced Electrocatalysts for the Oxygen Reduction Reaction in Energy Conversion Technologies

By: ...; [Lu, XF](#) (Lu, Xue Feng) ^[2]; ... ; [Lou, XW](#) (Lou, Xiong Wen (David)) ^[2]

[2] Nanyang Technol Univ, Sch Chem & Biomed Engr, Singapore

Volume: 4 Issue: 1 Pages: 45-68 DOI: 10.1016/j.joule.2019.12.014 Published: JAN 15, 2020 Document Type: Review	Times Cited: 211 Hot Paper Highly Cited Paper
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11. Covalent-Organic Frameworks: Advanced Organic Electrode Materials for Rechargeable Batteries

By: [Sun, T](#) (Sun, Tao) ^[1] ; [Xie, J](#) (Xie, Jian) ^[1] ; ... [Zhang, QC](#) (Zhang, Qichun) ^[1]

[1] Nanyang Technol Univ, Sch Mat Sci & Engr, Singapore

ADVANCED ENERGY MATERIALS Volume: 10 Issue: 19 Article Number: 1904199 DOI: 10.1002/aenm.201904199 Published: MAY 19, 2020 Document Type: Review	Times Cited: 187 Hot Paper Highly Cited Paper
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12. Convergence of Edge Computing and Deep Learning: A Comprehensive Surveys

By: ...; [Niyato, D](#) (Niyato, Dusit) ^[4];...

[4] Nanyang Technol Univ, Sch Comp Sci & Engr, Singapore, Singapore

IEEE COMMUNICATIONS SURVEYS AND TUTORIALS Volume: 22 Issue: 2 Page: 869-904 DOI: 10.1109/COMST.2020.2970550 Published: 2020 Document Type: Article	Times Cited: 174 Hot Paper Highly Cited Paper
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13. Recent Progress on Polymer Materials for Additive Manufacturing

By: [Tan, LJY](#) (Tan, Lisa Jiaying) ^[1]; [Zhu, W](#) (Zhu, Wei) ^[1]; [Zhou, K](#) (Zhou, Kun) ^[1], ^[2]

[1] Nanyang Technol Univ, Sch Mech & Aerosp Engn, Singapore Ctr Printing 3D, 50 Nanyang Ave, Singapore 639798, Singapore

[2] Nanyang Technol Univ, Nanyang Environm & Water Res Inst, Environm Proc Modelling Ctr, 1 Cleantech Loop, Singapore 637141, Singapore

ADVANCED FUNCTIONAL MATERIALS Volume: 30 Issue: 43 Article Number: 2003062 DOI: 10.1002/adfm.202003062 Published: OCT 22 2020 Document Type: Review	Times Cited: 117 Hot Paper Highly Cited Paper
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14. Design Strategies for Development of TMD-Based Heterostructures in Electrochemical Energy Systems

By: [Prabhu, P](#) (Prabhu, P.) ^[1]; [Jose, V](#) (Jose, Vishal) ^[1]; [Lee, JM](#) (Lee, Jong-Min) ^[1]

[1] Nanyang Technol Univ, Sch Chem & Biomed Engn, 62 Nanyang Dr, Singapore 637459, Singapore

MATTER Volume: 2 Issue: 3 Page: 526-553 DOI: 10.1016/j.matt.2020.01.001 Published: MAR 4 2020 Document Type: Review	Times Cited: 104 Hot Paper Highly Cited Paper
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15. State-of-the-art review of soft computing applications in underground excavations

By: ...; [Goh, ATC](#) (Goh, Anthony Teck Chee) ^[4];...

[4] Nanyang Technol Univ, Sch Civil & Environm Engn, Singapore 639798, Singapore

GEOSCIENCE FRONTIERS Volume: 11 Issue: 4 Page: 1095-1106 DOI: 10.1016/j.gsf.2019.12.003 Published: JUL 2020 Document Type: Review	Times Cited: 102 Hot Paper Highly Cited Paper
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16. How Intense Are You? Predicting Intensities of Emotions and Sentiments using Stacked Ensemble

By: ...; [Cambria, E](#) (Cambria, Erik) ^[2]

[2] Nanyang Technol Univ, Sch Chem & Biomed Engn, Singapore

IEEE COMPUTATIONAL INTELLIGENCE MAGAZINE Volume: 15 Issue: 1 Pages: 64-75 DOI: 10.1109/MCI.2019.2954667 Published: FEB 2020 Document Type: Article	Times Cited: 93 Hot Paper Highly Cited Paper
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17. Phytoremediation: A Promising Approach for Revegetation of Heavy Metal-Polluted Land

By: [Yan, A](#) (Yan, An) ^[1]; [Wang, YM](#) (Wang, Yamin) ^[1]; [Tan, SN](#) (Tan, Swee Ngin) ^[1]; ...; [Chen, Z](#) (Chen, Zhong) ^[1], ^[4]

[1] Nanyang Technol Univ, Natl Inst Educ, Nat Sci & Sci Educ, Singapore, Singapore

FRONTIERS IN PLANT SCIENCE Volume: 11 Article Number: 359 DOI: 10.3389/fpls.2020.00359 Published: APR 30 2020 Document Type: Review	Times Cited: 87 Hot Paper Highly Cited Paper
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18. A transparent superhydrophobic coating with mechanochemical robustness for anti-icing, photocatalysis and self-cleaning

By: ...; [Xiong, JQ](#) (Xiong, Jiaqing) ^[3]; ...; [Chen, Z](#) (Chen, Zhong) ^[3];...

[3] Nanyang Technol Univ, Sch Mat Sci & Engr, 50 Nanyang Ave, Singapore 639798, Singapore

CHEMICAL ENGINEERING JOURNAL Volume: 399 Article Number: 125746 DOI: 10.1016/j.cej.2020.125746 Published: NOV 1 2020 Document Type: Article	Times Cited: 77 Hot Paper Highly Cited Paper
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19. Mechanical properties and deformation mechanisms of gradient nanostructured metals and alloys

By: ...; [Gao, HJ](#) (Gao, Huajian) ^[3], ^[4]

[3] Nanyang Technol Univ, Sch Mech & Aerosp Engr, Coll Engr, Singapore, Singapore

NATURE REVIEWS MATERIALS Volume: 5 Issue: 9 Page: 706-723 DOI: 10.1038/s41578-020-0212-2 Published: SEP 2020 Document Type: Review	Times Cited: 75 Hot Paper Highly Cited Paper
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20. Co-Induced Electronic Optimization of Hierarchical NiFe LDH for Oxygen Evolution

By: ; ...; [Wang, H](#) (Wang, Hao) ^[3];...; [Lee, JM](#) (Lee, Jong-Min) ^[3];...

[3] Nanyang Technol Univ, Sch Chem & Biomed Engr, Singapore 637459, Singapore

SMALL Volume:16 Issue:38 Article Number: 2002426 DOI: 10.1002/smll.202002426 Published: SEP 2020 Document Type: Article	Times Cited: 64 Hot Paper
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21. Atomically Dispersed Cobalt Trifunctional Electrocatalysts with Tailored Coordination Environment for Flexible Rechargeable Zn-Air Battery and Self-Driven Water Splitting
Highly Efficient Thermally Co-evaporated Perovskite Solar Cells and Mini-modules

By: [Zhang, ZY](#) (Zhang, Zheyue) ^[1]; ...; [Zeng, ZP](#) (Zeng, Zhiping) ^[1]; [Huang, M](#) (Huang, Ming) ^[1]; [Yang, HB](#) (Yang, Hongbin) ^[1]; [Liu, B](#) (Liu, Bin) ^[1]; ...; [Chen, P](#) (Chen, Peng) ^[1].

[1] Nanyang Technol Univ, Sch Chem & Biomed Engr, 70 Nanyang Dr, Singapore 637457, Singapore

ADVANCED ENERGY MATERIALS Volume:10 Issue:48 Article Number:2002896 DOI:10.1002/aenm.202002896 Published:DEC 2020 Document Type:Article	Times Cited: 55 Hot Paper
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22. Liquid Thermo-Responsive Smart Window Derived from Hydrogel

By: [Zhou, Y](#) (Zhou, Yang) ^{[1], [2]}; [Wang, SC](#) (Wang, Shancheng) ^{[1], [2]}; ...; [Long, Y](#) (Long, Yi) ^{[1], [2], [6]}

[1] Nanyang Technol Univ, Sch Mat Sci & Engr, Singapore 639798, Singapore

JOULE Volume:4 Issue:11 Page:2458-2474 DOI:10.1016/j.joule.2020.09.001 Published:NOV 18 2020 Document Type:Article	Times Cited: 49 Hot Paper
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23. Bioremediation of co-contaminated soil with heavy metals and pesticides: Influence factors, mechanisms and evaluation methods

By: ...; [Wang, H](#) (Wang, Hou) ^{[1], [2], [3]},...

[3] Nanyang Technol Univ, Sch Chem & Biomed Engr, Singapore 637459, Singapore

CHEMICAL ENGINEERING JOURNAL Volume:398 Article Number:125657 DOI:10.1016/j.cej.2020.125657 Published;OCT 15 2020 Document Type:Article	Times Cited: 43 Hot Paper
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