https://www.nature.com/
https://science.sciencemag.org/

AI Related Papers on the Cover of *Nature* or *Science*

（2015.01~2021.08, incomplete survey）

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See more: https://github.com/TOM-ZXian/AI-Related-Papers-Published-in-Nature-or-Science

Cover Paper

AI玩游戏达到人类水准

Nature封面 2015.02.26

深度强化学习(DQN)+Atari游戏-DeepMind

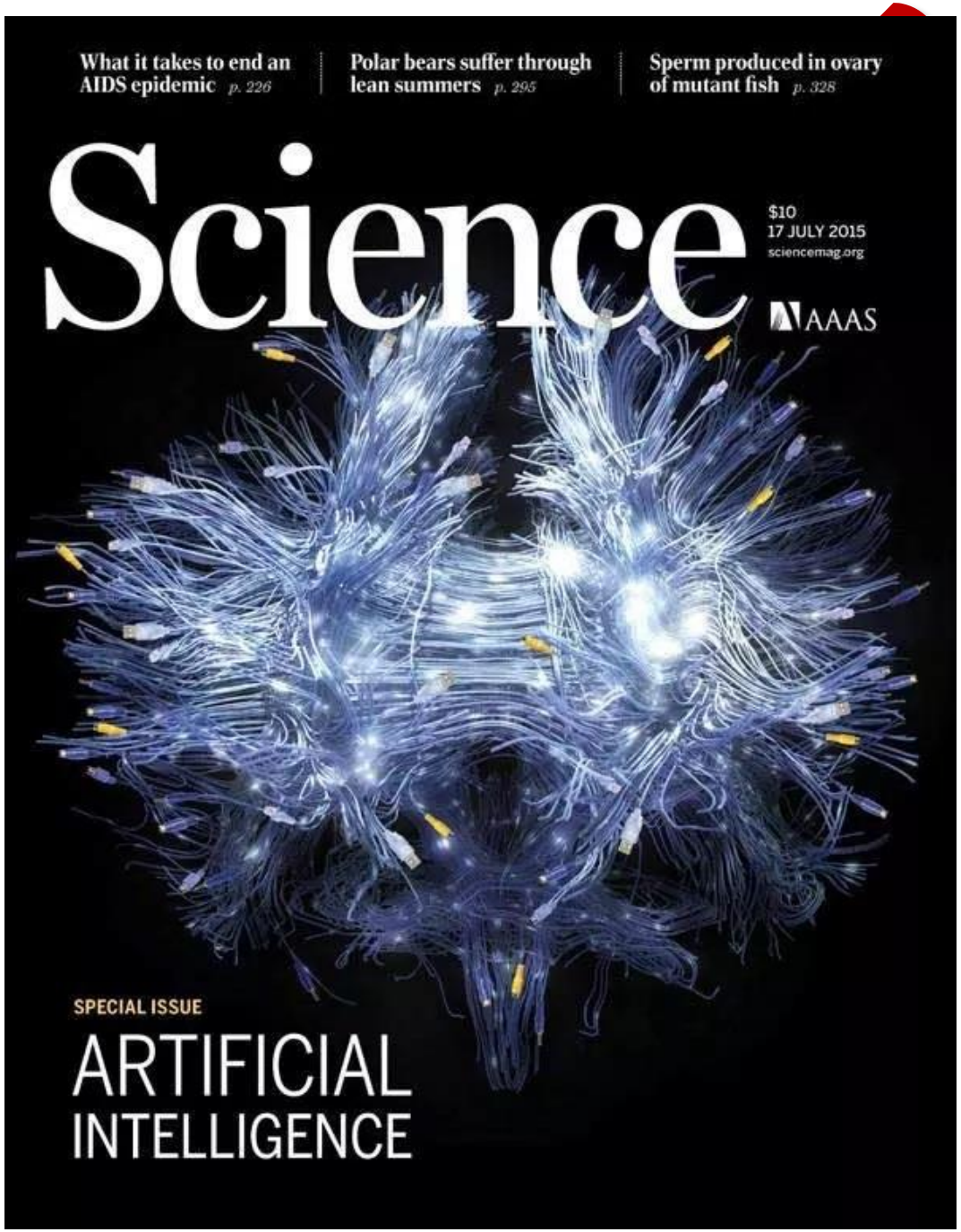
Mnih V, Kavukcuoglu K, Silver D, et al. Human-level control through deep reinforcement learning[J]. Nature, 2015, 518(7540): 529-533.
https://doi.org/10.1038/nature14236

Cover Paper

机器人适应“残障”登上Nature封面-2015.05.28

自适应机器人应对肢体损坏-法国索邦大学领衔

Cully A, Clune J, Tarapore D, et al. Robots that can adapt like animals[J]. Nature, 2015, 521(7553): 503-507. https://doi.org/10.1038/nature14422



Cover Paper

AI Special Issue登上 Science封面 2015.07.17

https://science.sciencemag.org/content/349/6245

Cover Paper

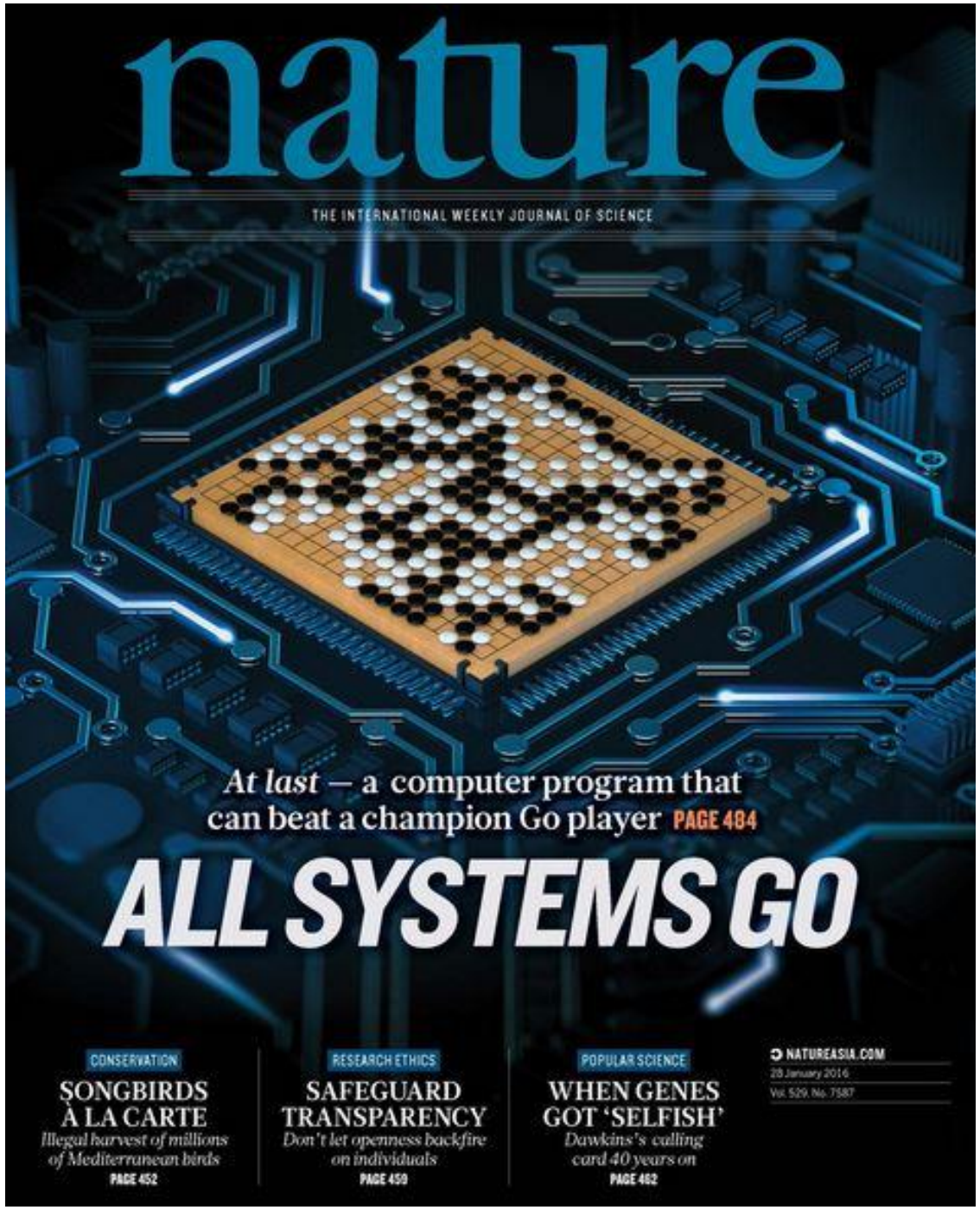
AI举一反三？Human-level概念学习 登上Science封面

2015.12.11

贝叶斯极小样本学习-手写字体
层次概念学习-纽约大学领衔

Lake B M, Salakhutdinov R, Tenenbaum J B. Human-level concept learning through probabilistic program induction[J]. Science, 2015, 350(6266): 1332-1338.

DOI: 10.1126/science.aab3050



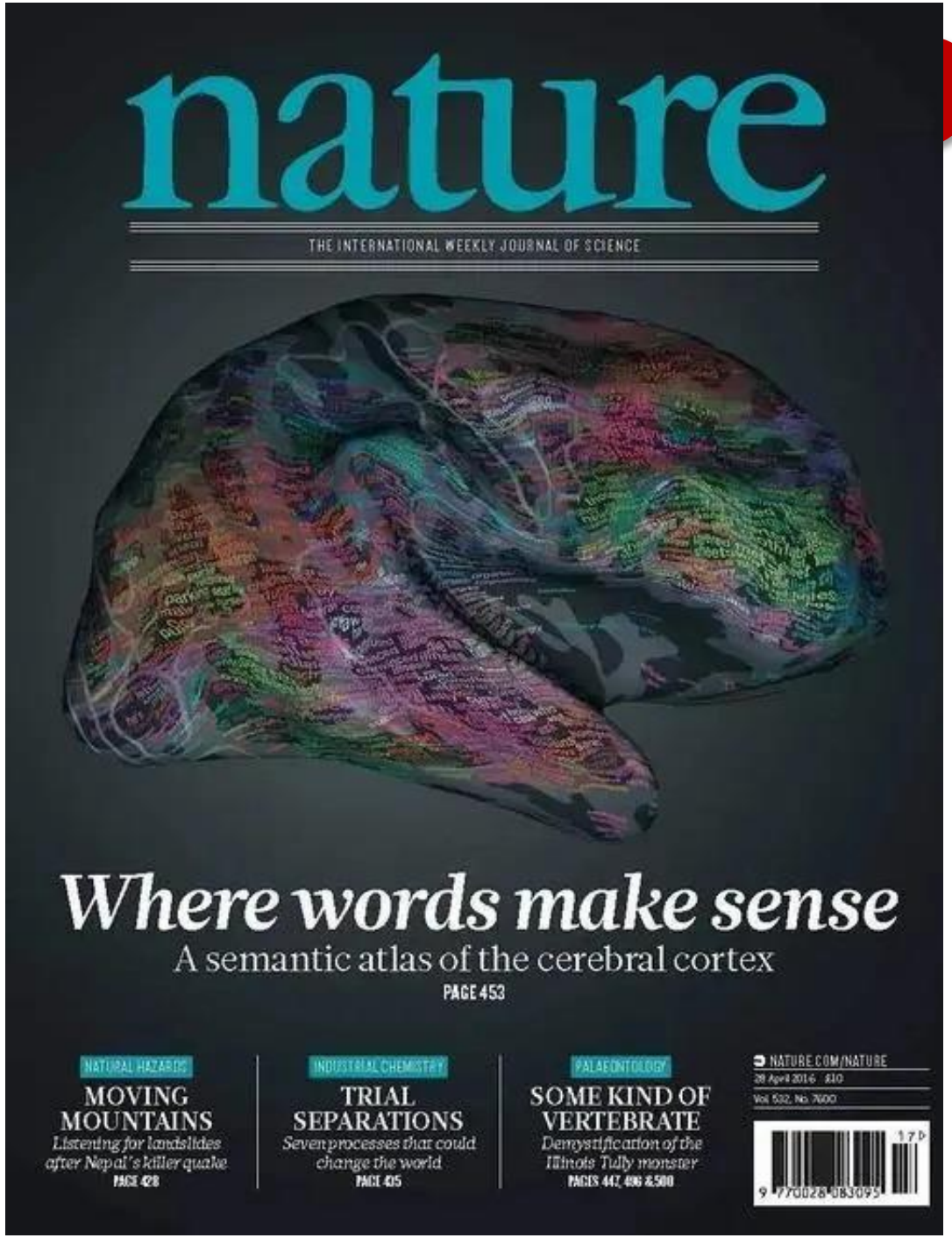
Cover Paper

AlphaGo轰动全球

Nature封面 2016.01.28

AI击败人类围棋冠军-DeepMind

Silver D, Huang A, Maddison C J, et al. Mastering the game of Go with deep neural networks and tree search[J]. Nature, 2016, 529(7587): 484-489. doi:10.1038/nature16961

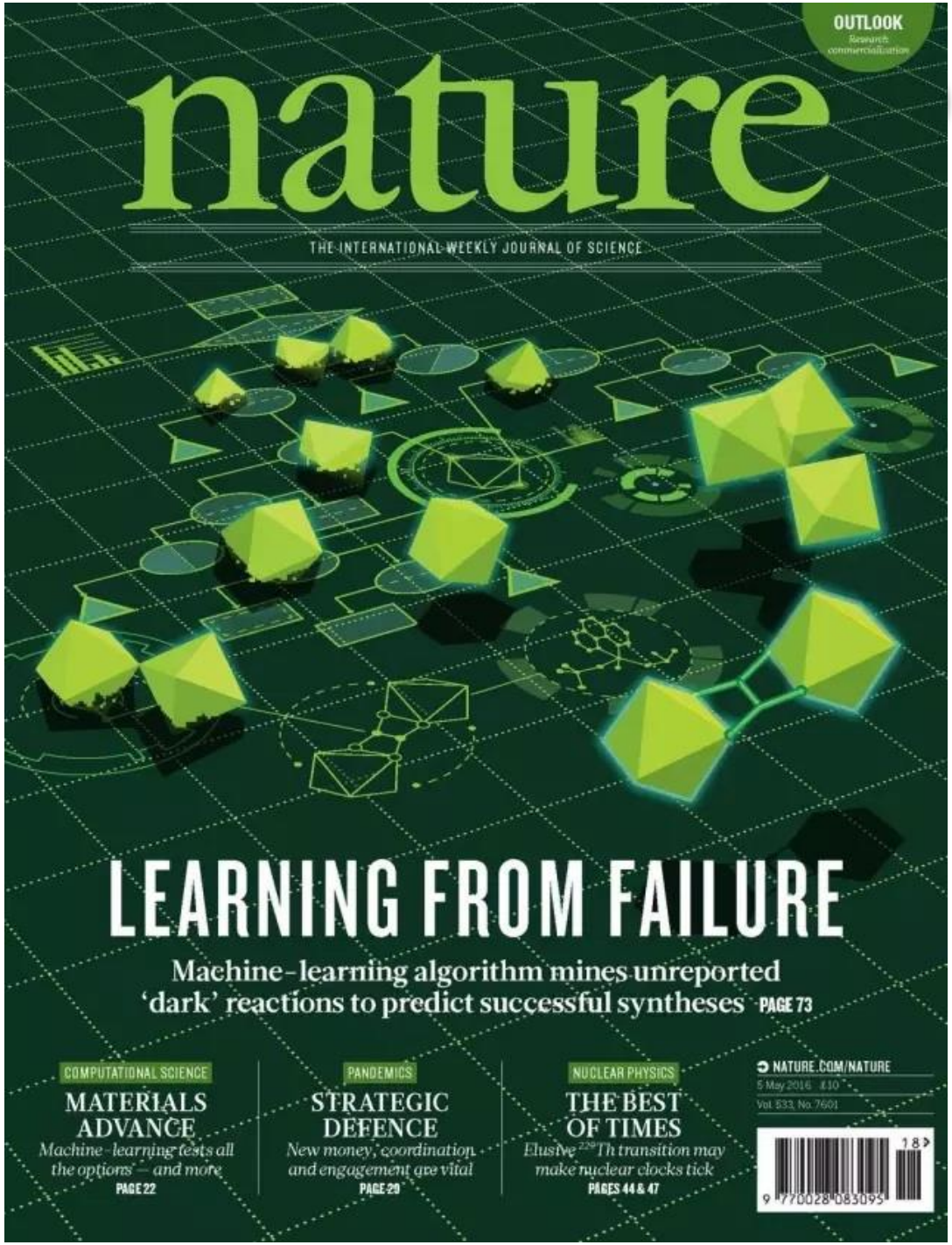


Cover Paper

大脑语义地图 登上Nature封面 2016.04.28

绘制出大脑语义地图(985 个英语常用词汇语义)-加州大学伯克利分校

Huth A G , Heer W D , Griffiths T L , et al. Natural speech reveals the semantic maps that tile human cerebral cortex[J]. Nature, 2016, 532(7600):453-458.
https://doi.org/10.1038/nature17637



Cover Paper

机器学习将掀起材料革命？Nature封面 2016.05.05

利用“废弃”数据成功预测新材料的合成-哈佛大学

Raccuglia P, Elbert K C, Adler P D F, et al. Machine-learning-assisted materials discovery using failed experiments[J]. Nature, 2016, 533(7601): 73-76.
https://doi.org/10.1038/nature17439

Cover Paper

AI皮肤癌诊断达专家水平 Nature封面 2017.02.02

深度学习识别皮肤癌-斯坦福大学

Esteva A, Kuprel B, Novoa R A, et al. Dermatologist-level classification of skin cancer with deep neural networks[J]. Nature, 2017, 542(7639): 115-118.
doi:10.1038/nature21056

Cover Paper

Prediction Special Issue登上Science封面 2017.02.03

https://science.sciencemag.org/content/355/6324

Cover Paper

AI拿下德州扑克

登上Science封面 2017.05.05

不完美信息博弈里程碑式突破-加拿大阿尔伯塔大学

Moravčík M, Schmid M, Burch N, et al. Deepstack: Expert-level artificial intelligence in heads-up no-limit poker[J]. Science, 2017, 356(6337): 508-513.
doi: 10.1126/science.aam6960

Cover Paper

AI有助于群体控制 登上Nature封面 2017.05.18

随机 AI 增加人类之间的协作性-耶鲁大学

Shirado H, Christakis N A. Locally noisy autonomous agents improve global human coordination in network experiments[J]. Nature, 2017, 545(7654): 370-374.
https://doi.org/10.1038/nature22332

Cover Paper

AI Transforms Science Special Issue登上Science封面 2017.07.07

https://science.sciencemag.org/content/357/6346

Cover Paper

基于DNA的神经网络 登上Nature封面 2018.07.04

DNA竞争网络正确识别“分子”手写数字-加州理工学院

Cherry K M, Qian L. Scaling up molecular pattern recognition with DNA-based winner-take-all neural networks[J]. Nature, 2018, 559(7714): 370-376. https://doi.org/10.1038/s41586-018-0289-6

Cover Paper

“果蝇”机器人 登上Science封面 2018.09.14

仿果蝇飞行机器人DelFly Nimble-代尔夫特理工大学

Karásek M, Muijres F T, De Wagter C, et al. A tailless aerial robotic flapper reveals that flies use torque coupling in rapid banked turns[J]. Science, 2018, 361(6407): 1089-1094.
DOI: 10.1126/science.aat0350

Cover Paper

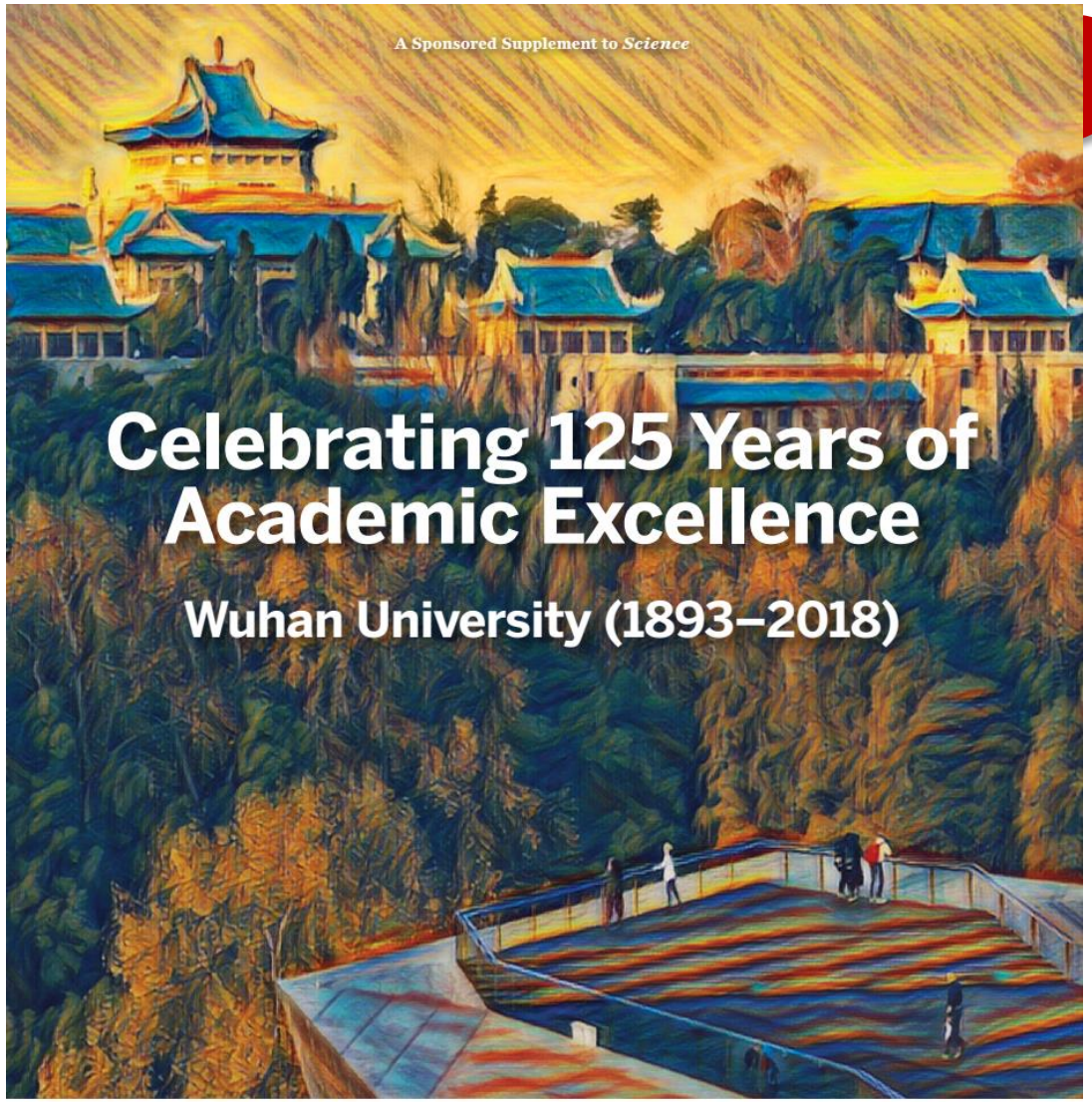
AlphaZero登上Science封面

2018.12.07

最强棋类AI通杀三大棋-DeepMind

Silver D, Hubert T, Schrittwieser J, et al. A general reinforcement learning algorithm that masters chess, shogi, and Go through self-play[J]. Science, 2018, 362(6419): 1140-1144.

DOI: 10.1126/science.aar6404



Cover Paper

AI画作登上 Science 武大125周年庆Custom Publishing封面 2018.12.28

艺术风格迁移-武大

Celebrating 125 Years Of Academic Excellence: Wuhan University (1893–2018).

https://link.zhihu.com/?target=http%3A//www.sciencemag.org/collections/celebrating-125-years-academic-excellence-wuhan-university-1893-2018

Cover Paper

果蝇大脑纳米级成像 登上Science封面 2019.01.18

里程碑：看清果蝇大脑的4000万个突触及连接-MIT领衔

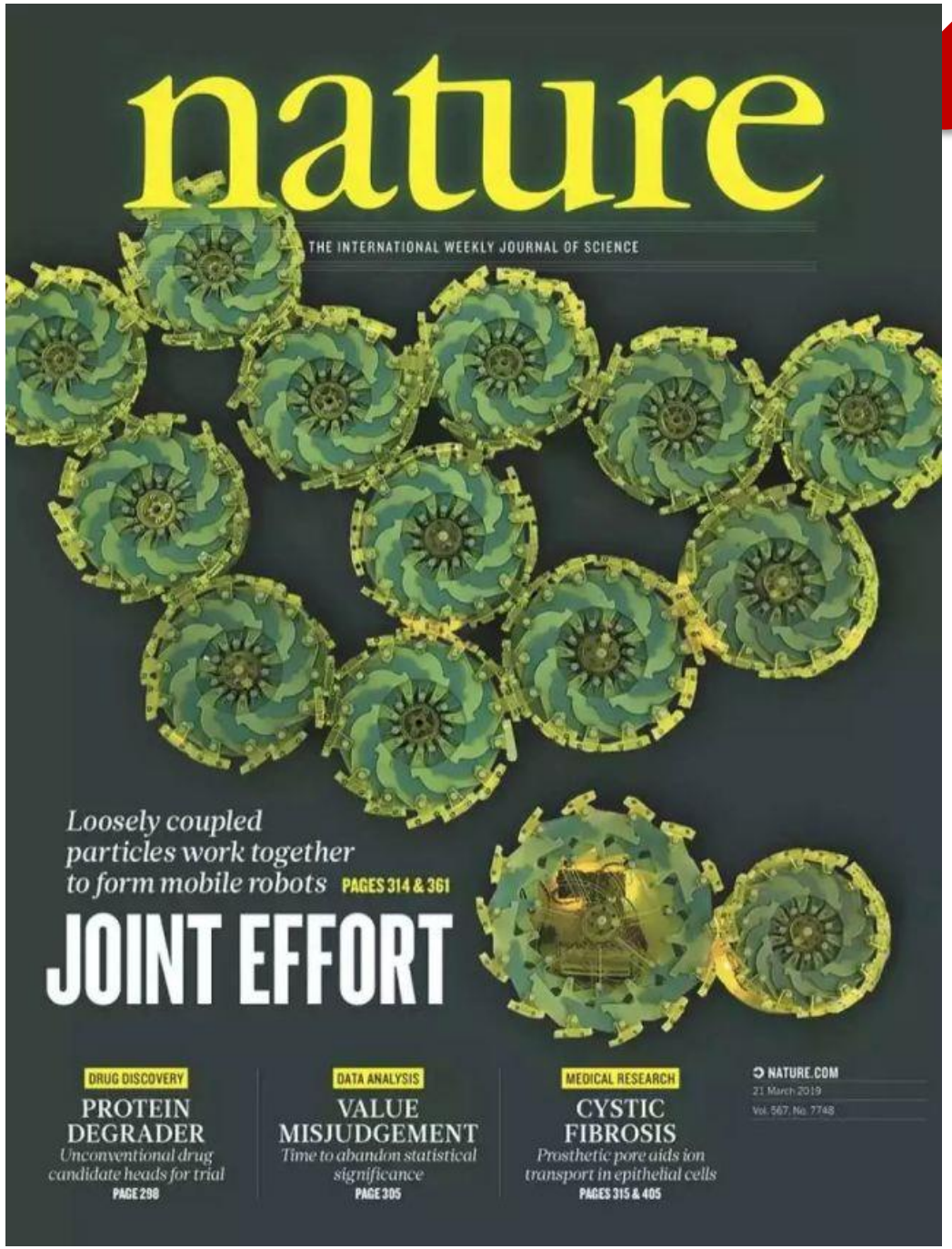
Gao R , Asano S M , Upadhyayula S , et al. Cortical column and whole-brain imaging with molecular contrast and nanoscale resolution[J]. Science, 2019, 363(6424):eaau8302.
DOI: 10.1126/science.aau8302

Cover Paper

量子机器学习算法 登上Nature封面 2019.03.14

量子态空间作为特征空间进行数据分类-IBM领衔

Havlíček V, Córcoles A D, Temme K, et al. Supervised learning with quantum-enhanced feature spaces[J]. Nature, 2019, 567(7747): 209-212. https://doi.org/10.1038/s41586-019-0980-2



Cover Paper

仿生群体机器人 Nature封面

2019.03.21

“粒子机器人”可完成光导向运动、搬运物体和避障-哈佛大学

Li S, Batra R, Brown D, et al. Particle robotics based on statistical mechanics of loosely coupled components[J]. Nature, 2019, 567(7748): 361-365. https://doi.org/10.1038/s41586-019-1022-9

Cover Paper

最轻飞行机器人登上Nature封面 2019.06.27

“蜜蜂”机器人自重仅259毫克-哈佛大学

Jafferis N T, Helbling E F, Karpelson M, et al. Untethered flight of an insect-sized flapping-wing microscale aerial vehicle[J]. Nature, 2019, 570(7762): 491-495.

https://doi.org/10.1038/s41586-019-1322-0

Cover Paper

“天机”登上Nature封面

2019.08.01

清华大学团队发布全球首款异构融合类脑芯片

Pei J, Deng L, Song S, et al. Towards artificial general intelligence with hybrid Tianjic chip architecture[J]. Nature, 2019, 572(7767): 106-111. https://doi.org/10.1038/s41586-019-1424-8

Cover Paper

多人德扑再登Science封面

2019.08.30

Pluribus 成功战胜了五名专家级人类玩家-Facebook 与卡耐基梅隆大学

Brown N, Sandholm T. Superhuman AI for multiplayer poker[J]. Science, 2019, 365(6456): 885-890.

DOI: 10.1126/science.aay2400

Cover Paper

高分辨率重建89个神经元

Science封面 2019.11.29

德国马克斯·普朗克大脑研究所对小鼠的大脑皮层进行了成像和分析

Motta A, Berning M, Boergens K M, et al. Dense connectomic reconstruction in layer 4 of the somatosensory cortex[J]. Science, 2019, 366(6469): eaay3134.
DOI: 10.1126/science.aay3134

Cover Paper

Facing facts 人脸识别偏见问题登上Nature封面（NEWS | FEATURE）2020.11.19

https://www.nature.com/nature/volumes/587/issues/7834

Cover Paper

AI 再次攻陷材料领域——助力非晶结构材料研究　登上Nature封面 2021.01.07

无序材料的仿真模拟已迈出了质的步伐-ML算法实现10万高压非晶硅原子的模拟-英国牛津大学领衔

Deringer V L, Bernstein N, Csányi G, et al. Origins of structural and electronic transitions in disordered silicon[J]. Nature, 2021, 589(7840): 59-64. https://doi.org/10.1038/s41586-020-03072-z

Cover Paper

Nature封面 2021.03.04

浙大软体机器人成功挑战马里亚纳海沟

Li G, Chen X, Zhou F, et al. Self-powered soft robot in the Mariana Trench[J]. Nature, 2021, 591(7848): 66-71.
https://doi.org/10.1038/s41586-021-03828-1

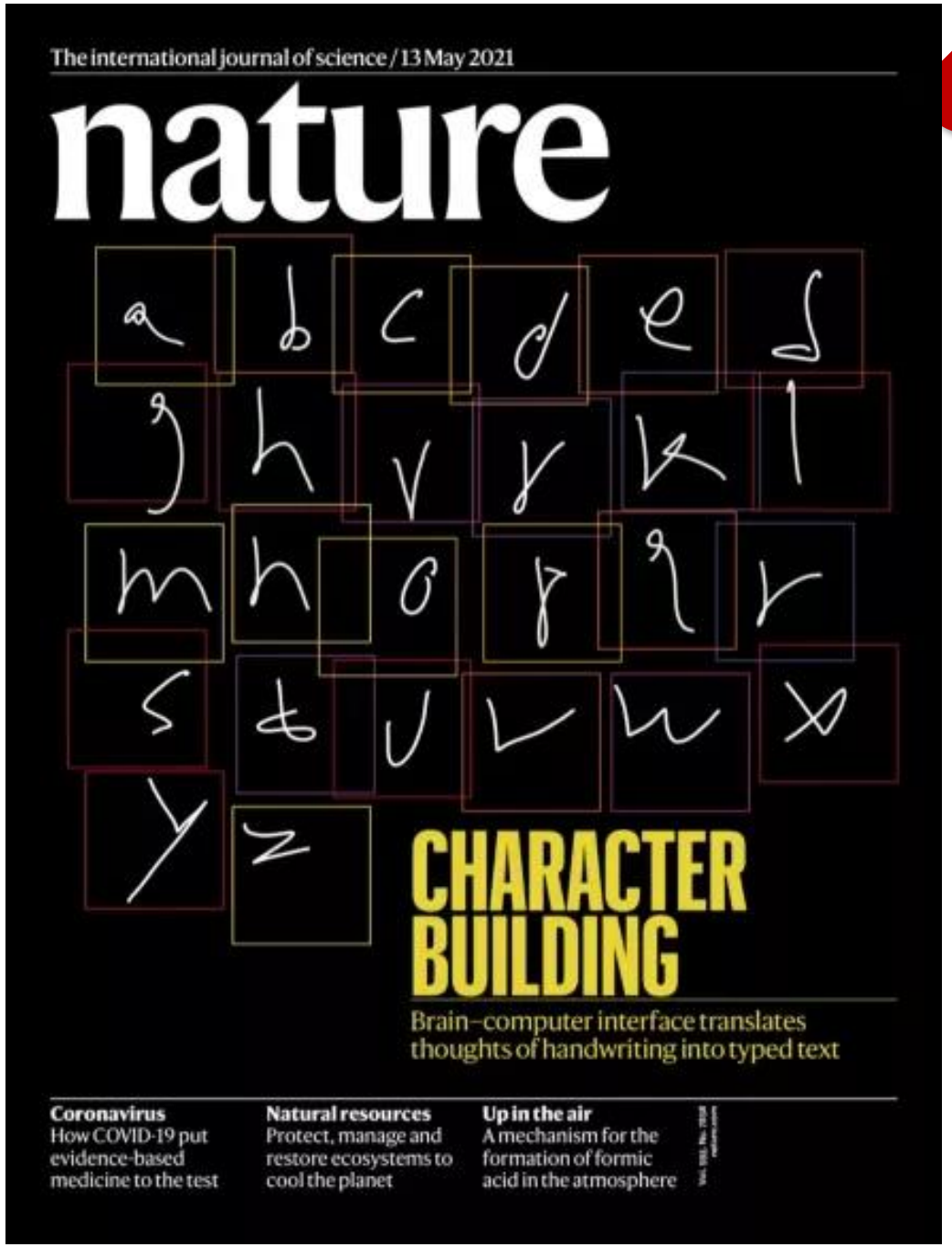
Cover Paper

最强AI辩手 Nature封面

2021.03.18

AI 系统Project Debater -IBM

Slonim N, Bilu Y, Alzate C, et al. An autonomous debating system[J]. Nature, 2021, 591(7850): 379-384. https://doi.org/10.1038/s41586-021-03828-1



Cover Paper

「意念手写」登上Nature封面

2021.05.13

斯坦福团队「意念手写」脑机接口重磅发布

Willett F R, Avansino D T, Hochberg L R, et al. High-performance brain-to-text communication via handwriting[J]. Nature, 2021, 593(7858): 249-254. https://doi.org/10.1038/s41586-021-03506-2

Cover Paper

新算法Swarm Learning登上Nature封面 2021.05.26

比联邦学习更安全，SL可保障医疗数据共享-德国波恩大学

Warnat-Herresthal S, Schultze H, Shastry K L, et al. Swarm Learning for decentralized and confidential clinical machine learning[J]. Nature, 2021, 594(7862): 265-270. https://doi.org/10.1038/s41586-021-03583-3

Cover Paper

计算社会学 Computational social science Special Issue 登上Nature封面 2021.07.08

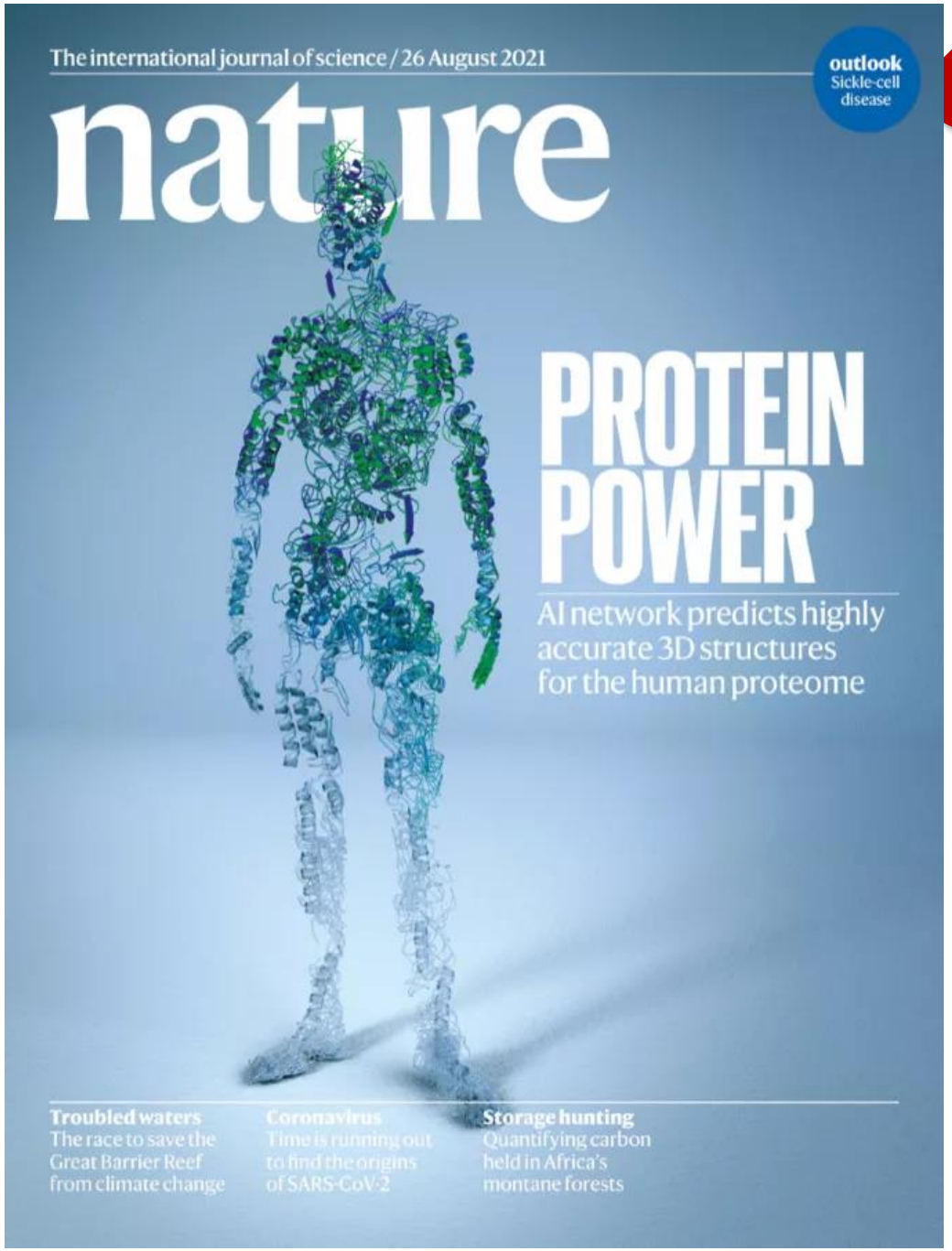
https://www.nature.com/nature/volumes/595/issues/7866

Cover Paper

RoseTTAFold登上Science封面 2021.07.15

蛋白质结构预测-华盛顿大学

Baek M, DiMaio F, Anishchenko I, et al. Accurate prediction of protein structures and interactions using a three-track neural network[J]. Science, 2021, 373(6557): 871-876.
DOI: 10.1126/science.abj8754



Cover Paper

AlphaFold2再登Nature封面

2021.07.21

人类蛋白质结构预测-DeepMind

Tunyasuvunakool K, Adler J, Wu Z, et al. Highly accurate protein structure prediction for the human proteome[J]. Nature, 2021, 596(7873): 590–596. https://doi.org/10.1038/s41586-021-03828-1

Cover Paper

RNA结构预测 登上Science封面 2021.08.27

AI算法准确预测RNA三维结构-斯坦福大学

Townshend R, Eismann S, Watkins A, et al. Geometric deep learning of RNA structure[J]. Science, 2021, 373(6558): 1047-1051.
DOI: 10.1126/science.abe5650


Thank you!