

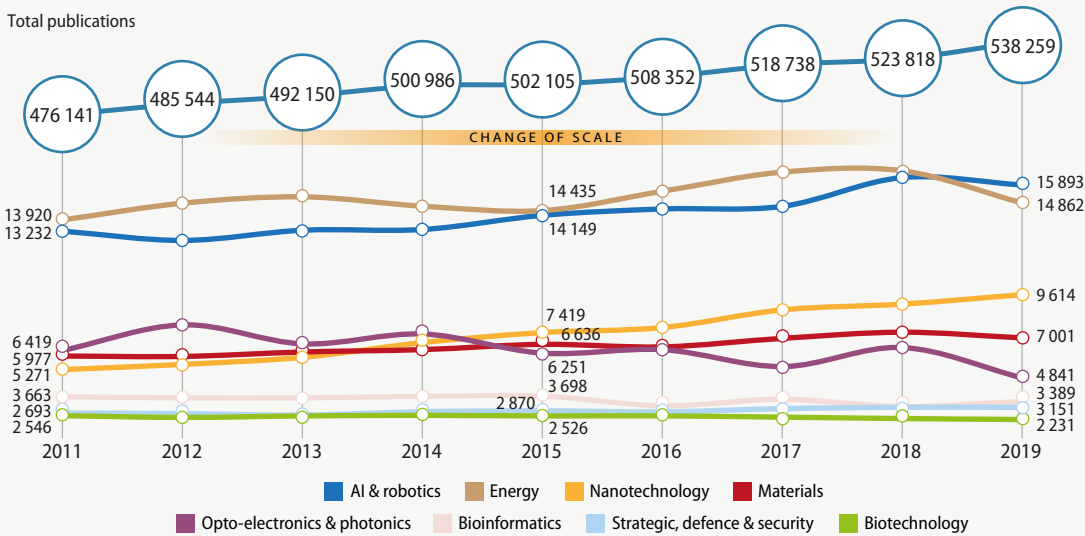


Figure 5.5: Trends in scientific publishing in the United States of America

Volume of scientific publications in the USA, 2011–2019

Total publications and output on cross-cutting strategic technologies

Total publications



Number of publications on the Internet of Things

832
in 2019

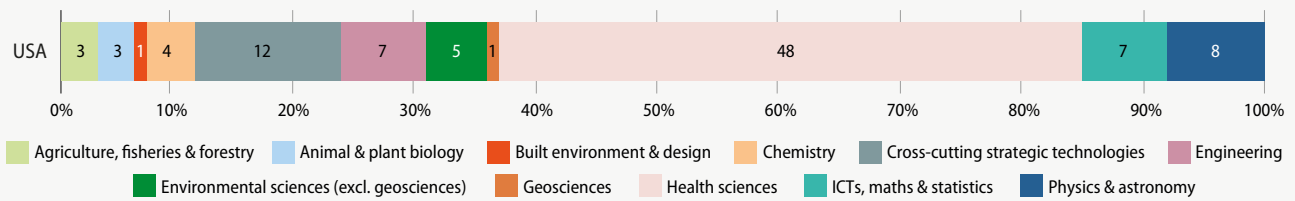


98
in 2015

The USA's publication output accounted for 30% of the world total in health sciences in 2019.

The first journals on blockchain technology date from 2018. US researchers produced 10 publications in those journals in 2018 and 76 in 2019.

Scientific publications in the USA by broad field of science, 2017–2019 (%)



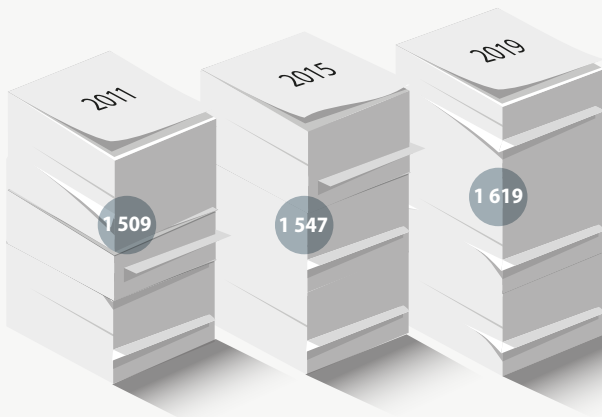
1.32

Average of relative citations for the USA, 2014–2016; the OECD average is 1.11

40%

Share of publications with foreign co-authors in the USA, 2017–2019; the OECD average is 34%

Scientific publications per million inhabitants in the USA, 2011, 2015 and 2019



How has output on SDG-related topics evolved since 2012?



Scientists in the USA are publishing more on the following topics than would be expected, relative to global averages: HIV (1.9 times the global average intensity), invasive species, ocean acidification and new or re-emerging viruses that can infect humans. They have published extensively on the Zika virus (see Chapter 8).

Scientists produced less than would be expected on the clean energy topics studied. Output grew substantially between 2012–2015 and 2016–2019 only on battery efficiency (from 7 479 to 10 647 publications) and smart-grid technologies (from 5 801 to 7 369). Output even dropped on biofuels and biomass (from 8 675 to 7 820), photovoltaics (from 8 661 to 7 647), wind-turbine technologies (from 4 289 to 4 092), hydrogen energy (from 4 115 to 4 034) and cleaner fossil fuel technology (from 1 334 to 1 116).

Among the selected topics with at least 1 000 publications during the period under study, the fastest-growing topic was that of sustainable transportation (+162%), with output rising from 4 871 (2012–2015) to 7 869 (2016–2019) publications.

For details, see Chapter 2

USA's top five partners for scientific co-authorship, 2017–2019 (number of publications)

	1st collaborator	2nd collaborator	3rd collaborator	4th collaborator	5th collaborator
USA	China (158 219)	UK (83 678)	Germany (69 443)	Canada (65 364)	France (45 675)

Source: Scopus (excluding Arts, Humanities and Social Sciences); data treatment by Science-Metrix