

Table S24. Sixteen disciplines in the major engineering subcategory and the numbers of total and OA documents in 2000–2021 and 2021

Disciplines	OA / Total 2000-21	OA % 2000-21	OA / Total 2021	OA% 2021
Engineering Multidisciplinary	135,126 / 413,959	32.6%	25,028 / 43,733	57.2%
Nanoscience Nanotechnology	149,217 / 639,231	23.3%	21,029 / 60,428	34.8%
Metallurgy Metallurgical Engineering	88,145 / 420,813	20.9%	15,998 / 35,999	44.4%
Engineering Biomedical	77,029 / 376,110	20.5%	9,527 / 25,617	37.2%
Engineering Ocean	10,382 / 54,881	18.9%	2,097 / 4,899	42.8%
Engineering Marine	9,261 / 49,320	18.8%	2,397 / 4,775	50.2%
Engineering Environmental	62,129 / 350,353	17.7%	8,731 / 38,851	22.5%
Engineering Civil	72,512 / 444,173	16.3%	10,947 / 43,651	25.1%
Engineering Petroleum	8,547 / 56,408	15.2%	1,191 / 4,079	29.2%
Engineering Manufacturing	37,432 / 252,566	14.8%	3,366 / 13,597	24.8%
Engineering Industrial	31,559 / 218,966	14.4%	2,783 / 13,690	20.3%
Engineering Mechanical	98,422 / 700,777	14.0%	9,980 / 39,672	25.2%
Engineering Electrical Electronic	429,428 / 3,083,074	13.9%	59,027 / 171,894	34.3%
Engineering Aerospace	20,360 / 152,040	13.4%	2,374 / 8,898	26.7%
Engineering Geological	13,618 / 110,163	12.4%	2,015 / 10,736	18.8%
Engineering Chemical	75,098 / 639,660	11.7%	11,669 / 61,123	19.1%
sum	1,206,647 / 7,058,382	17.1%	171,621 / 500,285	34.3%