

Table SINV-66

USPTO utility patents granted in microstructural technology and nanotechnology, by region, country, or economy: 1998–2020

(Number)

Region, country, or economy	Economy by income status	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
World	na	408	438	471	574	681	886	1,011	950	1,117	1,018	1,039	1,123	1,469	1,437	1,392	1,533	1,646	1,460	1,267	1,117	882	967	966
North America	na	200	213	239	309	371	504	568	551	612	558	571	569	698	669	654	729	784	695	601	534	400	453	469
Canada	High	3	5	5	5	2	15	15	14	16	12	17	11	22	22	22	20	24	22	20	14	8	16	15
Mexico	Upper middle	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	1	0	1	1
United States	High	197	208	234	304	369	489	553	537	595	545	553	558	676	646	632	708	759	672	581	519	391	436	453
Central America and Caribbean	na	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	0	1	0	1
Puerto Rico	High	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0
South America	na	0	1	0	0	0	1	0	1	0	0	0	0	1	1	2	1	2	1	0	2	1	2	2
Argentina	Upper middle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Brazil	Upper middle	0	1	0	0	0	0	0	1	0	0	0	0	1	1	1	1	2	1	0	1	1	1	1
Europe	na	65	52	50	58	73	86	101	101	116	113	110	125	201	206	207	235	245	241	213	202	180	181	175
EU-27 + UK ^a	na	60	47	44	52	67	76	89	93	104	106	97	116	183	185	193	218	225	223	193	188	167	169	160
United Kingdom	High	9	9	8	6	10	10	14	16	15	12	10	15	17	15	14	20	25	22	19	20	14	23	16
EU-27 ^b	na	50	38	37	46	58	66	75	77	89	93	87	101	166	171	179	198	200	201	174	168	153	145	143
Austria	High	1	0	1	0	0	0	1	2	2	2	3	2	5	5	6	6	2	6	3	6	7	6	10
Belgium	High	2	1	0	1	2	0	3	1	3	2	3	5	8	10	10	11	8	9	7	8	9	13	10
Denmark	High	0	0	0	0	1	2	1	2	1	2	3	2	1	1	1	2	2	3	3	1	3	5	2
Finland	High	1	1	0	0	1	1	2	2	1	1	0	2	2	4	5	4	2	3	5	8	3	8	4
France	High	16	13	9	9	11	12	14	15	13	14	13	18	46	42	40	38	45	44	35	28	28	27	21
Germany	High	20	17	18	21	27	38	36	41	47	49	41	44	63	62	72	80	85	85	69	71	71	50	61
Hungary	High	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	0	0	1	1	0	1	0	0
Ireland	High	0	0	0	1	1	1	1	0	2	0	1	1	2	1	2	4	3	1	1	2	2	1	4
Italy	High	2	1	1	3	4	2	5	3	7	8	8	5	10	14	7	13	13	16	14	15	11	22	20
Netherlands	High	4	3	1	5	5	5	5	6	9	11	10	14	20	15	22	25	24	16	20	18	13	7	7
Spain	High	0	1	1	2	1	1	1	0	0	0	1	1	2	2	1	4	5	5	4	3	2	2	0
Sweden	High	2	1	5	2	3	3	5	4	2	4	4	5	5	8	10	6	7	8	6	4	3	3	3
Other Europe	na	5	5	6	6	6	10	11	8	12	7	13	8	18	21	14	16	20	18	20	14	13	13	15
Other Europe-2020 ^b	na	15	14	13	12	16	20	25	24	27	20	23	24	35	35	28	37	45	39	39	34	27	36	31
Belarus	Upper middle	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0
Moldova	Lower middle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway	High	1	0	1	1	1	0	2	0	2	0	1	1	1	1	1	0	1	1	0	1	1	0	1
Russia	Upper middle	1	1	2	2	2	2	2	2	2	1	3	2	2	2	2	4	4	2	4	3	1	0	3
Switzerland	High	4	3	3	4	3	6	7	6	7	4	8	5	14	15	10	10	14	12	14	10	10	9	10
Ukraine	Lower middle	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	0
Asia	na	140	169	175	189	228	285	330	284	369	327	346	409	551	539	513	543	589	497	428	360	281	310	294

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China	Upper middle	1	0	0	0	1	1	3	3	8	7	7	17	23	22	29	47	65	60	59	60	40	58	65
India	Lower middle	0	0	0	0	1	1	2	1	2	2	1	2	1	2	4	6	8	9	6	7	7	4	3
Japan	High	129	155	159	170	193	244	264	229	277	236	236	274	360	352	310	300	299	213	172	115	88	92	73
Malaysia	Upper middle	0	0	0	0	0	0	1	1	1	0	1	1	0	0	0	1	1	1	1	1	1	2	2
Singapore	High	0	1	0	1	2	4	3	3	3	4	4	4	6	4	8	6	13	11	14	13	8	11	11
South Korea	High	9	11	6	13	20	26	37	32	51	42	63	80	112	112	91	103	112	109	87	72	57	64	56
Taiwan	High	2	3	10	5	11	9	19	15	27	35	33	30	49	46	70	79	92	93	88	91	79	77	83
Middle East	na	2	3	3	4	2	5	5	3	3	5	5	7	7	9	12	17	17	17	17	15	14	15	18
Israel	High	2	3	3	4	2	5	5	3	3	4	5	6	7	7	8	12	11	9	13	11	8	7	6
Africa	na	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	3	2	1	1	1	1	0	1
South Africa	Upper middle	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	1	0	0	0	0	0
Australia and Oceania	na	1	1	2	13	7	6	7	10	16	13	7	12	10	12	5	4	7	8	6	3	5	5	6
Australia	High	1	1	2	13	7	6	7	10	16	13	7	11	10	12	5	4	7	7	5	3	5	5	6
New Zealand	High	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0
Unclassified	na	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

na = not applicable, metric not calculated at this level.

EU = European Union; UK = United Kingdom; USPTO = U.S. Patent and Trademark Office.

^a The United Kingdom was a part of the EU for data purposes from 1973 to 2019.^b Beginning in 2020, the United Kingdom was no longer a member of the EU.**Note(s):**

USPTO patents are allocated according to patent inventorship information. USPTO patents are fractionally allocated among regions, countries, or economies based on the proportion of residences of all named inventors. Patents are classified under the World Intellectual Property Organization (WIPO) classification of patents, which classifies International Patent Classification (IPC) codes under 35 technical fields. IPC reformed codes take into account changes that were made to the WIPO classification in 2006 under the eighth version of the classification and were used to prepare these data. However, because PatentsView only provides the original IPC codes as they appeared on patents and not the IPC reformed codes, current Cooperative Patent Classification codes on patents were converted back to the most recent IPC classification to prepare these statistics. Fractional counts of patents were assigned to each technological field on patents to assign the proper weight of a patent to the corresponding technological fields under the classification. China includes Hong Kong.

Source(s):

National Center for Science and Engineering Statistics; Science-Metrix; PatentsView, USPTO, accessed June 2021.

Science and Engineering Indicators