

TABLE S8-18

USPTO patents and patent families granted in organic fine chemistry, by region, country, or economy: 1998–2018

(Number)

Region, country, or economy	1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018			
	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families				
China	11	112	9	162	11	309	11	266	13	236	13	466	21	895	17	828	19	1,279	23	1,267	27	1,412	47	1,695	76	2,019	77	3,034	124	4,401	174	5,070	230	5,656	247	7,692	278	8,178	297	6,836	296	7,160		
India	24	12	39	13	45	14	50	19	84	48	91	61	78	50	75	36	95	43	89	30	95	23	99	21	122	15	131	11	153	12	189	12	241	13	207	15	231	16	162	2				
Japan	826	1,559	798	1,543	728	1,188	837	1,058	858	799	659	866	561	1,259	467	940	554	1,181	541	1,539	467	1,614	575	1,464	682	1,589	766	1,743	860	1,891	785	1,721	768	1,703	766	1,336	617	1,304	591	1,034	538	924		
Malaysia	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	3	0	1	4	0	1	2	3	0	7	2	12	4	5	3	7	3	8	3	5	1	10	0	11	1			
Singapore	0	0	1	0	1	0	1	0	1	0	1	0	3	0	2	0	3	2	3	3	2	2	6	4	4	0	8	1	16	1	11	3	20	2	20	1	15	0	16	2	16	0		
South Korea	44	369	51	489	68	206	64	143	82	244	77	366	66	472	52	1,121	57	1,661	82	1,548	73	945	82	484	102	503	122	790	142	987	164	949	186	1,022	183	913	188	1,031	202	1,387	210	1,354		
Taiwan	20	30	23	26	19	29	30	54	27	40	23	26	28	51	21	36	30	36	24	42	26	38	37	95	47	47	52	67	59	87	83	147	87	125	87	134	58	134	67	110	64	66		
All others	1	1	2	2	3	1	3	0	2	1	1	1	3	0	1	2	1	2	1	2	4	3	1	2	1	1	6	4	4	3	2	5	7	3	3	5	7	3	5	6	6	5		
Middle East	18	5	17	8	24	12	32	8	44	10	46	10	35	7	32	2	51	8	47	7	59	10	61	4	60	8	42	3	45	6	64	14	74	12	64	8	56	14	68	18	82	26		
Israel	17	4	16	6	19	6	28	6	40	5	42	8	35	4	31	0	47	3	42	3	56	6	60	1	57	3	38	2	40	3	55	2	42	1	34	3	33	2	32	1				
All others	1	1	0	2	5	6	3	2	4	5	3	2	1	4	1	4	4	5	4	3	4	4	1	3	3	5	5	1	5	6	12	11	19	11	23	7	22	14	35	16	50	25		
Africa	2	20	3	36	4	16	3	11	5	17	5	16	3	10	2	11	2	13	4	8	2	11	9	4	11	3	7	4	3	5	11	7	7	3	5	5	9	4	6	2	3	2		
South Africa	2	17	3	35	3	13	3	5	5	11	5	8	1	12	3	6	1	11	2	9	2	5	7	3	7	6	1	2	1	8	0	5	0	7	0	5	0	7	0	5	0	0	0	
All others	0	2	0	1	1	3	0	5	0	6	0	8	0	5	0	4	1	0	1	5	2	3	1	1	1	4	2	3	0	5	2	6	1	3	2	5	2	4	1	2	2	2	2	
Australia and Oceania	15	12	11	11	14	17	20	20	19	31	20	14	19	11	15	14	23	13	17	29	14	26	23	19	27	25	33	24	38	48	48	45	35	58	43	77	34	94	33	21	32	11		
Australia	13	12	8	11	8	17	14	20	17	31	17	14	15	11	14	16	13	13	29	12	26	18	18	20	25	26	24	32	48	43	45	30	57	36	77	29	94	28	20	25	11			
New Zealand	2	0	3	0	6	0	4	0	2	0	3	0	4	0	1	0	7	0	4	0	2	0	5	0	8	0	7	0	5	0	5	0	7	0	5	0	5	0	6	0	0	0		
All others	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unclassified	2	11	2	117	2	56	1	8	2	4	0	1	0	2	0	10	0	29	0	3	0	1	0	5	0	2	0	1	1	2	0	2	0	0	0	1	10	1	0	1	0	1	1	

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

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. International Patent Documentation (INPADOC) patent families across all patent offices covered in the Worldwide Patent Statistical Database (PATSTAT) are counted according to the year of the first granted patent in the patent family. Patent families are allocated according to patent inventorship information found on the priority patent of the INPADOC patent families. To account for missing ownership information in PATSTAT for some offices, a method designed by de Rassenfosse et al. (2012) is used to fill in missing information on priority patents using information in successive filings within the patent families (see technical documentation for details). Patent families are fractionally allocated among regions, countries, or economies based on the proportion of residences of all named inventors. Because of data coverage issues for some patent offices in PATSTAT, statistics for some countries may be underestimated partially for some years or across the whole trend. Countries with identified issues include India (missing data) and South Africa (no data for 2018). For Italy, because of data gaps regarding information on granted patents, patent applications are used instead, which slightly overestimates Italy's output and creates a small shift in the year for which its output is accounted. The EU includes 28 member countries. China includes Hong Kong.

Source(s)

Science-Metrix; PATSTAT, accessed April 2019; PatentsView, USPTO, accessed June 2019.