

Table SINV-19

International patent families granted in organic fine chemistry, 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	6,629	6,948	5,807	5,544	6,006	6,447	7,360	6,243	7,924	8,193	8,600	8,305	8,948	10,596	13,205	13,863	14,678	16,028	16,183	14,888	14,846	14,961	16,406
North America	na	1,487	1,537	1,251	1,242	1,362	1,304	1,171	878	1,169	1,155	1,289	1,318	1,388	1,345	1,497	1,645	1,778	1,679	1,509	1,426	1,314	1,288	1,207
Canada	High	45	48	45	35	54	49	44	28	44	54	64	72	71	69	68	71	70	69	72	52	48	55	51
Mexico	Upper middle	4	2	0	0	3	3	1	1	0	3	2	3	1	2	3	5	3	6	15	19	26	19	1
United States	High	1,438	1,487	1,206	1,206	1,305	1,252	1,126	849	1,124	1,098	1,223	1,243	1,316	1,274	1,427	1,569	1,705	1,604	1,422	1,355	1,240	1,213	1,155
Central America and Caribbean	na	1	2	1	1	0	1	1	1	1	1	4	1	0	1	2	3	3	2	1	2	1	0	1
Puerto Rico	High	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
South America	na	8	8	8	10	16	13	16	9	12	11	14	17	18	21	25	23	25	26	39	33	54	54	102
Argentina	Upper middle	2	0	1	1	2	1	3	1	1	2	2	1	1	1	2	2	1	2	2	0	1	1	2
Brazil	Upper middle	4	5	7	8	12	11	12	7	10	6	11	14	16	19	20	19	22	22	35	29	51	50	96
Europe	na	2,298	2,144	1,862	1,776	1,997	2,172	2,288	1,941	2,185	2,212	2,365	2,102	2,131	2,113	2,575	2,378	2,289	2,173	1,976	1,969	2,006	1,960	1,793
EU-27 + UK ^a	na	1,833	1,698	1,478	1,479	1,602	1,701	1,779	1,531	1,750	1,754	1,809	1,580	1,630	1,606	1,981	1,898	1,783	1,611	1,569	1,422	1,482	1,506	1,454
United Kingdom	High	234	187	169	149	185	204	199	180	191	175	211	152	126	104	105	92	95	76	68	77	73	72	61
EU-27 ^b	na	1,599	1,511	1,309	1,330	1,417	1,497	1,580	1,351	1,559	1,579	1,598	1,428	1,505	1,503	1,875	1,806	1,688	1,536	1,501	1,345	1,409	1,434	1,393
Austria	High	17	9	11	17	14	21	16	12	14	13	16	10	17	11	15	19	22	16	15	8	13	15	12
Belgium	High	26	25	25	20	29	25	24	24	31	34	39	38	39	39	42	49	47	54	39	32	31	24	26
Denmark	High	27	16	11	27	16	22	21	17	17	16	31	28	32	28	23	23	18	14	20	15	10	13	17
Finland	High	11	20	11	13	13	20	7	12	12	14	8	15	15	6	10	12	11	13	11	10	10	7	10
France	High	382	344	327	383	375	400	401	372	520	443	441	421	456	508	702	585	486	510	454	328	355	446	548
Germany	High	692	606	522	548	642	625	658	548	627	578	572	495	500	442	509	553	571	517	493	470	489	471	401
Hungary	High	14	16	16	10	13	29	20	13	15	25	19	17	34	18	12	15	11	16	19	14	9	15	12
Ireland	High	5	3	2	3	4	8	5	2	2	2	3	7	4	5	7	6	6	5	6	5	3	6	4
Italy	High	125	187	175	75	112	85	144	73	28	32	33	40	60	60	52	52	46	44	44	137	114	79	35
Netherlands	High	60	52	39	58	44	51	48	38	41	54	58	49	49	56	49	56	63	57	46	41	56	62	44
Spain	High	48	43	36	29	34	50	60	59	57	76	66	69	103	92	91	89	75	66	66	70	48	52	41
Sweden	High	26	27	13	22	31	38	35	34	38	37	51	34	26	25	27	20	20	20	14	12	18	14	16
Other Europe	na	465	445	384	297	394	470	509	409	435	458	556	521	501	507	595	480	506	562	408	547	524	455	339
Other Europe-2020 ^b	na	699	632	552	447	579	675	708	589	626	633	767	673	626	610	700	571	601	638	475	624	597	526	400
Belarus	Upper middle	0	0	0	0	0	4	2	1	3	1	0	1	3	3	2	1	0	1	1	1	0	1	0
Moldova	Lower middle	5	8	3	4	3	10	9	8	9	7	8	16	17	8	9	12	10	9	3	7	3	13	11
Norway	High	6	6	4	8	6	9	4	7	4	4	7	4	10	10	9	7	6	8	4	7	5	4	2
Russia	Upper middle	357	350	303	210	298	342	343	305	304	306	369	344	327	367	448	339	353	418	264	420	409	339	261
Switzerland	High	80	70	62	55	69	69	75	58	82	91	110	98	101	79	86	77	70	75	89	77	71	68	58

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Ukraine	Lower middle	10	8	9	10	12	31	67	23	27	43	46	52	34	34	34	36	59	45	39	29	27	20	0
Asia	na	2,547	2,728	2,210	2,126	2,109	2,341	3,298	3,105	4,178	4,549	4,708	4,667	5,230	6,989	8,965	9,670	10,457	12,023	12,531	11,369	11,383	11,570	13,192
China	Upper middle	119	168	321	271	245	477	914	847	1,312	1,347	1,549	1,891	2,330	3,453	4,906	5,679	6,374	8,432	8,942	7,769	8,043	8,159	9,660
India	Lower middle	19	29	37	48	69	92	94	78	82	89	101	112	105	97	119	136	124	163	170	168	122	128	112
Japan	High	1,994	1,984	1,597	1,522	1,335	1,324	1,745	1,378	1,705	2,058	2,147	2,025	2,171	2,463	2,756	2,636	2,638	2,175	2,065	1,715	1,546	1,441	1,444
Malaysia	Upper middle	1	0	0	0	1	1	0	1	3	4	1	5	6	12	7	9	12	11	7	11	2	2	4
Singapore	High	5	7	4	5	3	2	5	2	8	6	4	5	2	11	14	13	18	11	19	12	9	9	10
South Korea	High	376	505	218	223	409	410	487	754	1,024	992	853	515	557	865	1,059	1,032	1,135	1,074	1,167	1,556	1,537	1,726	1,868
Taiwan	High	32	32	31	56	45	30	51	41	43	50	47	112	57	80	99	161	150	148	151	126	110	98	87
Middle East	na	19	25	28	37	46	59	45	27	38	29	40	35	31	26	39	42	38	39	47	44	51	49	58
Israel	High	18	22	21	35	42	57	41	26	28	24	34	28	25	23	28	28	25	24	20	21	13	17	20
Africa	na	31	46	26	18	20	23	25	14	19	21	17	17	19	9	14	16	8	12	7	4	5	3	8
South Africa	Upper middle	28	45	23	13	14	14	20	10	19	16	12	16	15	4	9	8	2	6	2	2	2	1	1
Australia and Oceania	na	220	278	271	324	445	530	509	249	249	204	154	136	123	85	81	75	71	66	47	36	26	30	37
Australia	High	195	247	251	298	411	492	467	211	194	156	99	85	72	39	34	32	25	25	23	18	15	22	33
New Zealand	High	24	31	20	26	34	39	42	39	55	48	54	51	51	47	47	43	46	41	24	18	11	8	4
Unclassified	na	19	180	150	10	11	3	6	19	73	10	9	14	7	7	8	11	10	7	26	5	7	6	9

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

EU = European Union; UK = United Kingdom.

^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):**

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. (2013) is used to fill missing information on priority patents using information in successive filings within the families. Priority patents not indexed in PATSTAT are replaced by the next utility patent(s) in the families according to filing dates. Patent families 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. China includes Hong Kong. Data were extracted in June 2021. 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 year for which its output is accounted. As patent authorities become more involved with the European Patent Organisation, these gaps should disappear in the future, strengthening the robustness of statistics for these countries.

Source(s):

National Center for Science and Engineering Statistics; Science-Metrix; PATSTAT, accessed October 2021.