

TABLE S8-41

U.S. patent families granted, by WIPO technical field: 1998–2018

(Number)

WIPO technical field	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
All technical fields	59,221	58,006	56,025	53,545	50,589	49,800	47,332	39,805	46,149	39,689	37,632	39,363	48,734	45,279	49,911	51,827	54,759	52,150	50,367	49,328	45,755
Analysis of biological materials	439	379	293	296	237	235	197	138	143	125	107	110	130	117	93	86	87	116	114	119	110
Audio-visual technology	2,500	2,349	2,386	2,258	2,125	2,288	2,322	1,912	2,267	1,877	1,675	1,772	1,952	2,026	2,597	2,503	2,947	2,631	2,327	2,273	1,954
Basic communication processes	1,127	1,092	1,172	1,256	1,291	1,307	1,289	1,041	1,317	1,254	1,037	1,018	1,145	914	865	1,009	997	833	875	788	616
Basic materials chemistry	1,227	1,197	1,029	932	845	786	654	447	497	407	336	331	466	436	454	465	559	502	421	373	316
Biotechnology	1,306	1,127	823	696	583	412	318	249	347	316	305	319	332	333	388	388	370	401	345	386	330
Chemical engineering	1,414	1,434	1,225	1,104	997	951	847	687	745	670	635	628	802	791	763	729	719	674	638	639	545
Civil engineering	2,180	2,062	2,058	1,924	1,803	1,606	1,490	1,266	1,261	1,032	962	1,005	1,419	1,142	1,265	1,370	1,397	1,470	1,314	1,378	1,262
Computer technology	6,012	5,983	5,553	5,659	5,547	6,015	6,409	5,897	8,486	7,268	7,771	8,898	11,049	10,421	12,144	12,653	13,620	11,913	11,539	10,316	9,214
Control	1,154	1,116	1,113	994	907	987	991	820	1,040	879	966	908	1,088	1,057	1,185	1,157	1,297	1,199	1,218	1,464	1,470
Digital communication	1,312	1,517	1,714	1,610	1,729	1,853	2,249	2,037	2,329	1,958	2,089	2,240	2,640	2,450	3,050	3,335	4,346	4,999	5,143	5,078	4,970
Electrical machinery, apparatus, energy	3,072	3,110	3,121	3,065	2,890	2,718	2,782	2,179	2,529	2,183	2,073	2,207	2,433	2,223	2,210	2,350	2,433	2,474	2,635	2,684	2,477
Engines, pumps, turbines	1,233	1,096	1,339	1,493	1,598	1,418	1,296	1,148	1,185	951	868	901	1,091	1,160	1,405	1,330	1,345	1,601	1,610	1,631	1,676
Environmental technology	776	693	643	589	572	504	461	374	401	381	391	399	478	426	434	466	485	471	434	418	376
Food chemistry	486	588	567	473	352	316	336	264	257	249	228	252	237	301	392	420	364	425	314	367	418
Furniture, games	2,846	2,671	2,504	2,065	1,956	1,931	1,716	1,374	1,480	1,262	1,081	1,132	1,432	1,277	1,296	1,345	1,442	1,400	1,288	1,240	1,171
Handling	1,909	1,967	1,760	1,583	1,408	1,287	1,033	966	1,066	928	822	878	1,018	1,016	940	1,068	995	873	834	780	812
IT methods for management	309	367	401	322	359	385	353	460	453	457	604	610	1,143	1,055	1,302	1,564	1,509	1,028	988	1,304	1,337
Machine tools	1,606	1,695	1,605	1,514	1,219	1,265	1,160	991	1,161	943	666	699	939	986	1,098	1,169	1,212	1,033	822	765	623
Macromolecular chemistry, polymers	797	756	708	678	667	562	456	330	334	306	251	267	356	299	263	275	286	242	207	173	137
Materials, metallurgy	662	607	539	531	504	465	421	315	321	270	230	261	333	289	286	260	277	287	245	243	236
Measurement	2,901	2,660	2,626	2,565	2,603	2,728	2,528	2,172	2,551	2,333	2,299	2,185	2,335	2,111	2,143	2,102	2,200	2,183	2,189	2,227	2,080
Mechanical elements	1,665	1,696	1,683	1,553	1,471	1,350	1,247	1,000	1,110	864	750	789	960	916	1,045	1,168	1,129	1,271	1,213	1,303	1,280
Medical technology	3,935	3,558	3,387	2,944	2,701	2,876	2,186	1,759	1,846	1,632	1,358	1,588	2,438	2,359	2,560	2,582	2,383	2,262	2,124	1,991	1,815
Microstructural and nanotechnology	17	24	38	51	61	96	98	74	38	20	22	19	29	42	52	81	127	135	117	92	52
Optics	2,117	2,049	1,925	1,962	1,901	2,057	1,977	1,529	1,595	1,389	1,263	1,164	1,280	1,062	1,026	984	980	913	876	804	745
Organic fine chemistry	1,210	1,106	874	806	748	578	462	358	466	348	371	323	380	336	314	359	395	336	269	209	173
Other consumer goods	1,839	1,947	1,733	1,532	1,302	1,139	1,076	821	935	841	714	693	884	806	897	885	845	926	921	886	912
Other special machines	2,349	2,241	2,030	1,928	1,766	1,800	1,539	1,195	1,172	972	861	863	1,219	1,138	1,113	1,166	1,233	1,235	1,187	1,258	1,184
Pharmaceuticals	1,286	1,156	902	858	688	560	397	280	305	255	215	202	264	223	258	249	289	230	186	167	157
Semiconductors	1,819	2,241	2,535	2,759	2,724	2,657	2,486	2,059	2,139	1,929	1,716	1,782	2,331	1,954	1,721	2,034	2,296	2,311	2,487	2,314	1,852
Surface technology, coating	803	833	815	829	797	767	689	578	595	601	587	602	830	761	772	781	675	570	500	449	395
Telecommunications	2,071	2,268	2,267	2,192	2,135	2,096	2,280	1,994	2,781	2,229	2,133	2,225	2,615	2,555	3,089	2,868	2,637	2,129	1,863	1,816	1,590
Textile and paper machines	1,143	1,042	1,097	1,085	989	937	873	665	606	478	468	382	551	464	544	486	586	430	327	248	214
Thermal processes and apparatus	692	683	618	632	562	571	516	453	444	320	245	248	342	325	315	351	387	425	428	465	423
Transport	2,956	2,611	2,887	2,775	2,505	2,257	2,152	1,915	1,866	1,656	1,449	1,371	1,733	1,454	1,575	1,729	1,869	2,200	2,359	2,667	2,824

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Unclassified	52	83	53	32	45	40	42	60	80	106	84	93	64	54	56	62	43	20	11	14	8

IT = Information Technology; WIPO = World Intellectual Property Organization.

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.

Source(s)

Science-Metrix; PATSTAT, accessed April 2019.

Science and Engineering Indicators