

Appendix table 5-63

U.S. university patent awards, by technology area: 1992–2012

Technology area	1992–2012	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
All university patents	66,509	1,602	1,698	1,875	2,009	2,322	2,652	3,434	3,654	3,426	3,554	3,560	3,510	3,271	2,928	3,537	3,198	3,001	3,267	4,550	4,389	5,072
Biotechnology	18,628	259	337	313	383	550	863	1,172	1,197	1,048	1,187	1,060	914	896	728	1,027	965	898	973	1,365	1,234	1,259
Pharmaceuticals	7,702	201	232	257	247	383	375	453	535	528	460	479	458	348	297	338	267	245	273	397	354	575
Measurement techniques and instrumentation	5,129	140	147	175	180	189	172	211	226	230	243	233	286	318	268	277	263	254	244	332	357	384
Materials	3,088	118	119	117	135	144	113	138	143	147	152	169	169	158	139	181	133	123	135	187	188	180
Medical equipment	3,051	114	97	130	116	128	145	196	215	174	162	163	192	150	127	114	87	90	107	151	154	239
Semiconductors	2,891	88	71	107	112	76	76	97	95	120	121	131	165	120	136	169	163	148	168	242	242	244
Optics	2,634	68	65	61	69	60	85	105	115	128	112	141	139	153	143	184	181	183	166	169	133	174
Information processing	2,597	33	38	46	43	69	77	125	92	84	102	92	99	113	109	162	153	157	170	247	255	331
Medical electronics	2,463	78	65	101	91	91	75	92	111	100	120	112	135	113	97	123	109	126	127	195	186	216
Chemicals	2,375	80	79	77	99	90	100	125	117	138	159	181	179	123	145	100	81	69	78	127	101	127
Agriculture	2,342	64	50	69	63	71	127	124	140	115	144	112	124	81	112	119	117	114	126	139	146	185
Materials manufacturing	2,067	47	59	72	71	54	58	91	91	105	84	114	104	111	102	98	119	79	109	159	161	179
Chemical engineering and environmental processes	1,619	78	78	69	70	72	67	71	100	95	74	86	81	83	71	74	63	58	72	81	83	93
Telecommunications	1,429	21	26	38	32	36	23	51	37	36	47	59	57	65	61	103	84	104	108	126	138	177
Electronic components and devices	1,392	20	21	24	34	35	38	50	57	56	47	51	82	76	79	94	76	81	82	122	147	120
Power generation and distribution	775	16	24	20	30	29	32	27	35	21	35	30	34	43	38	51	39	40	37	78	52	64
Computer systems	707	14	16	15	28	21	20	28	35	39	24	32	30	32	33	36	40	38	43	56	56	71
Industrial machinery and tools	637	21	22	21	22	31	28	36	38	25	39	29	41	35	28	39	30	18	31	37	35	31
Food and tobacco	629	31	26	28	36	49	42	40	58	44	43	47	37	25	21	16	9	11	20	17	13	16
Automation and control	527	8	16	12	17	17	25	24	18	16	25	18	19	21	20	32	39	28	31	46	49	46
Networking	465	6	6	6	11	10	6	6	10	12	14	19	13	21	23	35	29	27	21	47	70	73
Audio-visual electronics	432	11	9	9	16	10	11	22	20	17	23	18	16	19	16	33	25	11	30	25	32	59
Electrical components and equipment	426	5	9	21	15	9	14	14	22	11	18	19	19	21	16	31	23	9	21	53	42	34
Motor vehicles and parts	382	10	8	5	18	12	11	14	19	27	19	20	22	25	19	19	19	18	16	18	32	31
Personal care and household goods	381	15	24	18	15	17	14	22	20	17	17	49	23	22	23	9	8	14	9	12	16	17
Aerospace and defense	281	7	9	4	4	8	5	13	20	14	13	22	15	17	16	12	12	11	14	21	19	25
Other	269	5	11	11	6	9	11	17	16	13	14	8	16	18	11	10	15	10	10	19	17	22
Oil, gas, and mining	227	11	9	10	11	15	8	11	10	7	12	13	1	10	7	7	7	7	10	18	18	25
Industrial manufacturing	224	15	7	18	7	10	4	11	11	10	6	17	5	12	11	10	8	10	6	13	14	19
Construction and building components	217	6	3	5	4	8	8	15	15	10	9	6	13	11	8	13	10	6	12	18	17	20
Civil engineering	180	5	3	5	8	7	8	7	18	19	13	11	9	10	10	2	6	7	6	6	10	10
Household appliances and lighting	127	2	3	4	8	4	3	13	9	8	3	4	4	2	8	8	8	4	5	11	8	8

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Technology area	1992–2012	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Recreation and sports equipment	91	3	5	4	2	3	5	5	2	4	7	3	5	6	1	3	4	2	3	9	6	9
Office equipment	63	1	2	2	4	3	2	5	5	4	3	6	1	5	3	2	5	1	2	2	2	3
Other transport	62	1	2	1	2	2	1	3	2	4	3	6	3	8	2	6	1	0	2	5	2	6

NOTES: Data include institutions affiliated with academic institutions, such as university and alumni organizations, foundations, and university associations. Universities vary in how patents are assigned (e.g., to boards of regents, individual campuses, or entities with or without affiliation with university). The Patent Board™ technology areas constitute an application-oriented classification system that maps the thousands of International Patent Classes (IPCs) at the main group level into 1 of 35 technology areas. If a patent has more than one IPC, only the primary IPC is considered in mapping. Data in the table are not comparable to previous versions due to changes in the classification system.

SOURCES: National Science Foundation, National Center for Science and Engineering Statistics, and The Patent Board™, special tabulations (2013) from U.S. Patent and Trademark Office (USPTO), Patent Grant Bibliographic Data.

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