

# TECHNOLOGY ASSESSMENT AND FORECAST REPORT

## CHEMICAL CLASSES

1977 - December 2001



April 2002

U.S. PATENT AND TRADEMARK OFFICE  
INFORMATION PRODUCTS DIVISION -- TAF BRANCH  
PK3- Suite 441, WASHINGTON, DC 20231  
tel (703) 306-2600 / FAX (703) 306-2737

*A TECHNOLOGY ASSESSMENT AND FORECAST REPORT*

# Technology Profile Report - CHEMICAL Classes

## Explanation of Data

This Technology Profile Report profiles the patent activity for U.S. utility patents \* granted between **1977** and **December 2001** in CHEMICAL technology discipline classes within the U.S. Patent Classification System (USPCS).

The report is generated by identifying appropriate Patent and Trademark Office (PTO) classes, i.e., those entirely or substantially pertinent to the technology discipline of interest. The patents in these classes are then included in the profile. This procedure results, in most cases, in the inclusion of the majority of patents relevant to the technology discipline and few, if any, patents which are not relevant. However, any patent listing provided should not be considered to be inclusive of all relevant patents, nor exclusive of all irrelevant patents.

### Data Distribution By Date of Grant and By Date of Application

#### **Parts A1 and A2**

Part A1 distributes utility patent GRANT data by year of patent grant ("Patents Granted By Date of Patent Grant"). Part A2 distributes patent GRANT data by the year in which the patented application was filed ("Patents Granted By Date of Patent Application"). Parts A1 and A2 each provide patent counts (pages A1-1 and A2-1) and percent distributions (pages A1-2 and A2-2).

Patent data, as shown in the "**Pre 1988**" column, correspond to selected patents \* in the data base which were granted during the period **1977 to 1987**.

#### **Part B**

Part B of this report distributes patent GRANT data for organizations that have received U.S. patents since 1977. Data are presented by the year in which the patent was granted ("Patents By Year of Grant") and the year the patented application was filed ("Patents by Year of Application").

### DATA FOR THOSE APPLICATIONS WHICH WERE FILED BUT NEVER ISSUED (ROUGHLY 25% OF TOTAL FILINGS) ARE NOT INCLUDED IN THIS REPORT.

Since the average time period between filing for a patent and the issuing of the patent (i.e., a patent's "pendency") is now about 24 months, the patented application data for applications filed from **1998** to **DECEMBER 2001** are incomplete.\*\* This is because a significant number of the applications filed from **1998** to **DECEMBER 2001**, which will ultimately become patents, were still pending in **DECEMBER 2001**. Since they had not yet become patents at the time this report was prepared, they were not included in this report.

Patented application data are of significant value since the date an application was filed more accurately reflects when the technology was developed. Additionally, fluctuations in data based on application date are much more likely to reflect changes in technological activity, since such fluctuations would for the most part be immune from changes in PTO processing such as occurred in 1986 when the PTO issued fewer patents than would normally have been expected due to a lack

of funds to print patents. Note that a patent's "pendency" can be quite variable from one patent to another thereby affecting the date of patent grant. Such variation in pendency is determined by many factors, including PTO workload (which varies between technologies), budget and manpower levels, patent printing schedules, etc.

"**Patents Granted By Date of Patent Application**", as shown in the "**Pre 1988**" column, correspond to patent grants in the report which were filed prior to **1988**.

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#### Parts of the Report

**Parts A1 and A2** present tables which show, by number and percent, the patent activity in the technology discipline. Part A1 presents data by year of patent grant ("Patents Granted By Date of Patent Grant"). Part A2 redistributes grant data by year of patent application ("Patents Granted By Date of Patent Application"). The location of patent origin is determined by the residence of the first-named inventor at the time of grant.

**Patent ownership** information reflects ownership at the time of patent grant and does not include subsequent changes in ownership. If more than one assignee was declared at the time of grant, the patent ownership is attributed to the first-named assignee. The U.S. and Foreign Corporations ownership categories count predominantly corporate patents; however, patents assigned to other organizations such as small businesses, nonprofit organizations, universities, etc. are also included in this category. While U.S. Government patent ownership includes only patents granted to the Federal Government, no such distinction is made for the Foreign Government ownership category.

**Part B** is a ranked listing of national and international organizations (i.e., corporations, universities, government agencies) which have received U.S. patents since **1977**.\* Data line 1 for each listed organization ("Patents By Year of Grant") distributes counts of patent grants by year of grant. Data line 2 for each organization ("Patents By Year of Application") redistributes those same patent grants by year in which the patented applications were filed. Information on patent ownership reflects ownership at the time of patent grant. Although a substantial effort has been made to combine name variations into a single organizational name, many organizations continue to have patents listed under more than one organizational name.

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\* The term "patent", as used above, refers to "utility" patents. Other patent documents (i.e., design, plant and reissue patents, statutory invention registrations, defensive publications) are not included in this profile report.

\*\* As of **12/31/2001**, utility patent application data were approximately 79% complete for patent applications filed in 1998, 53% complete for 1999 filings and 16% complete for 2000 filings. They were essentially complete for applications filed prior to 1998.

## CHEMICAL, ELECTRICAL, MECHANICAL CLASSES

DECEMBER 2001

CHEMICAL	8	23	44	48	51	55	65	71	75	95	96	106	117	127
	136	148	149	156	159	162	196	201	202	203	204	205	208	209
	210	216	252	260	261	264	376	419	420	422	423	424	426	427
	428	429	430	435	436	438	442	501	502	504	507	508	510	512
	514	516	518	520	521	522	523	524	525	526	527	528	530	532
	534	536	540	544	546	548	549	552	554	556	558	560	562	564
	568	570	585	588	800	930	976	987						

The following subclasses are also Chemical:

134/1-42; 131/274-279; 505/100-126, 300-512, 725-785, 800-824, 951

ELECTRICAL	174	178	191	200	218	219	235	250	257	290	307	310	313	314
	315	318	320	322	323	324	326	327	329	330	331	332	333	334
	335	336	337	338	340	341	342	343	345	346	348	349	355	358
	360	361	362	363		365	367	368	369	370		372	373	375
	377	378	379	380	381	382	383	386	388	392	396	399	455	503
	505	700	701	702	703	704	705	706	707	708	709	710	711	712
	713	714	716	717	725	902								

The following subclasses are also Electrical:

84/600-746; 385/1-52; 359/1-195, 237-361, 558-590, 901-902; 968/876-977; 984/300-398

MECHANICAL	2	4	5	7		12	14	15	16		19	24	26	
	27	28	29	30	33	34	36	37	38	40	42	43	47	49
	52	53	54	56	57	59	60	62	63	66	68	69	70	
	72	73	74	76	79	81	82	83	84	86	87	89	91	92
	99	100	101	102	104	105	108	109	110	111	112	114	116	118
	119	122	123	124	125	126	128		131	132	134	135	137	138
	139	140	141	142	144	147	150	152	157	160	163	164	165	166
	168	169	171	172	173	175	177	180	181	182	184	185	186	187
	188	190	192	193	194	198	199	206	211	212	213	215	217	220
	221	222	223	224	225	226	227	228	229	231	232	234	236	237
	238	239	241	242	244	245	246	248	249	251	254	256	258	266
	267	269	270	271		273	276	277	278	279	280	281	283	285
	289	291	292	293	294	295	296	297	298	299	300	301	303	305
	312	347	351	352	353	356	359	366	374	384	385	400	401	402
	403	404	405	406	407	408	409	410	411	412	413	414	415	416
	417	418	425	431	432	433	434	439	440	441	445	446	449	450
	451	452	453	454	460	462	463	464	470	472	473	474	475	476
	477	482	483	492	493	494	600	601	602	604	606	607	623	901
	968	984												

The following subclasses are also Mechanical:

209/3.1-3.3, 44-44.4, 509-707, 900-942; 8/147-159

TECHNOLOGY ASSESSMENT AND FORECAST PROGRAM TECHNOLOGY DISCIPLINES FOR  
 U.S. PATENT CLASSIFICATION SYSTEM CLASSES AS OF DECEMBER 2001  
CHEMICAL, ELECTRICAL, MECHANICAL

| Class |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 2M    | 74M   | 141M  | 206M  | 267M  | 336E  | 400M  | 454M  | 552C  |
| 4M    | 75C   | 142M  | 208C  | 269M  | 337E  | 401M  | 455E  | 554C  |
| 5M    | 76M   | 144M  | 209C* | 270M  | 338E  | 402M  | 460M  | 556C  |
| 7M    | 79M   | 147M  | 210C  | 271M  | 340E  | 403M  | 462M  | 558C  |
| 8C*   | 81M   | 148C  | 211M  | 273M  | 341E  | 404M  | 463M  | 560C  |
| 12M   | 82M   | 149C  | 212M  | 276M  | 342E  | 405M  | 464M  | 562C  |
| 14M   | 83M   | 150M  | 213M  | 277M  | 343E  | 406M  | 470M  | 564C  |
| 15M   | 84M*  | 152M  | 215M  | 278M  | 345E  | 407M  | 472M  | 568C  |
| 16M   | 86M   | 156C  | 216C  | 279M  | 346E  | 408M  | 473M  | 570C  |
| 19M   | 87M   | 157M  | 217M  | 280M  | 347M  | 409M  | 474M  | 585C  |
| 23C   | 89M   | 159C  | 218E  | 281M  | 348E  | 410M  | 475M  | 588C  |
| 24M   | 91M   | 160M  | 219E  | 283M  | 349E  | 411M  | 476M  | 600M  |
| 26M   | 92M   | 162C  | 220M  | 285M  | 351M  | 412M  | 477M  | 601M  |
| 27M   | 95C   | 163M  | 221M  | 289M  | 352M  | 413M  | 482M  | 602M  |
| 28M   | 96C   | 164M  | 222M  | 290E  | 353M  | 414M  | 483M  | 604M  |
| 29M   | 99M   | 165M  | 223M  | 291M  | 355E  | 415M  | 492M  | 606M  |
| 30M   | 100M  | 166M  | 224M  | 292M  | 356M  | 416M  | 493M  | 607M  |
| 33M   | 101M  | 168M  | 225M  | 293M  | 358E  | 417M  | 494M  | 623M  |
| 34M   | 102M  | 169M  | 226M  | 294M  | 359M* | 418M  | 501C  | 700E  |
| 36M   | 104M  | 171M  | 227M  | 295M  | 360E  | 419C  | 502C  | 701E  |
| 37M   | 105M  | 172M  | 228M  | 296M  | 361E  | 420C  | 503E* | 702E  |
| 38M   | 106C  | 173M  | 229M  | 297M  | 362E  | 422C  | 504C  | 703E  |
| 40M   | 108M  | 174E  | 231M  | 298M  | 363E  | 423C  | 505E* | 704E  |
| 42M   | 109M  | 175M  | 232M  | 299M  | 365E  | 424C  | 507C  | 705E  |
| 43M   | 110M  | 177M  | 234M  | 300M  | 366M  | 425M  | 508C  | 706E  |
| 44C   | 111M  | 178E  | 235E  | 301M  | 367E  | 426C  | 510C  | 707E  |
| 47M   | 112M  | 180M  | 236M  | 303M  | 368E  | 427C  | 512C  | 708E  |
| 48C   | 114M  | 181M  | 237M  | 305M  | 369E  | 428C  | 514C  | 709E  |
| 49M   | 116M  | 182M  | 238M  | 307E  | 370E  | 429C  | 516C  | 710E  |
| 51C   | 117C  | 184M  | 239M  | 310E  | 372E  | 430C  | 518C  | 711E  |
| 52M   | 118M  | 185M  | 241M  | 312M  | 373E  | 431M  | 520C  | 712E  |
| 53M   | 119M  | 186M  | 242M  | 313E  | 374M  | 432M  | 521C  | 713E  |
| 54M   | 122M  | 187M  | 244M  | 314E  | 375E  | 433M  | 522C  | 714E  |
| 55C   | 123M  | 188M  | 245M  | 315E  | 376C  | 434M  | 523C  | 716E  |
| 56M   | 124M  | 190M  | 246M  | 318E  | 377E  | 435C  | 524C  | 717E  |
| 57M   | 125M  | 191E  | 248M  | 320E  | 378E  | 436C  | 525C  | 725E  |
| 59M   | 126M  | 192M  | 249M  | 322E  | 379E  | 438C  | 526C  | 800C  |
| 60M   | 127C  | 193M  | 250E  | 323E  | 380E  | 439M  | 527C  | 901M  |
| 62M*  | 128M  | 194M  | 251M  | 324E  | 381E  | 440M  | 528C  | 902E  |
| 63M   | 131M* | 196C  | 252C  | 326E  | 382E  | 441M  | 530C  | 930C  |
| 65C   | 132M  | 198M  | 254M  | 327E  | 383E  | 442C  | 532C  | 968M* |
| 66M   | 134M* | 199M  | 256M  | 329E  | 384M  | 445M  | 534C  | 976C  |
| 68M   | 135M  | 200E  | 257E  | 330E  | 385M* | 446M  | 536C  | 984M* |
| 69M   | 136C  | 201C  | 258M  | 331E  | 386E  | 449M  | 540C  | 987C  |
| 70M   | 137M  | 202C  | 260C  | 332E  | 388E  | 450M  | 544C  |       |
| 71C   | 138M  | 203C  | 261C  | 333E  | 392E  | 451M  | 546C  |       |
| 72M   | 139M  | 204C  | 264C  | 334E  | 396E  | 452M  | 548C  |       |
| 73M   | 140M  | 205C  | 266M  | 335E  | 399E  | 453M  | 549C  |       |

\*8/147-159 are mechanical

\*84/600-746 are electrical

\*131/274-279 are chemical

\*134/1-42 are chemical

\*209/3.1-3.3, 44-44.4, 509-707, 900-942 are mechanical

\*359/1-195, 237-361, 558-590, 901-902 are electrical

\*385/1-52 are electrical

\*505/100-126, 300-512, 725-785, 800-824, 951 are chemical

\*968/876-977 are electrical

\*984/300-398 are electrical

April 9, 2002

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USPTO. TPD-TAF Branch

Part A1

Patent Grants as Distributed By Year of Patent Grant



## ---- Patents Granted By Date Of Patent Grant (Granted: Jan 01, 1977 - Dec 31, 2001) ----

	PERCENT OF PATENTS															
	Pre 1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Total
<b>Total</b>	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
U.S. Origin	57	52	51	50	51	53	52	53	52	54	54	53	53	53	54	
Foreign Origin	43	48	49	50	49	47	48	47	48	46	46	47	47	49	46	
JAPAN	14	20	20	21	21	21	22	22	21	19	18	18	18	18	18	
GERMANY	11	11	10	10	10	9	8	8	8	8	8	8	7	7	8	
UNITED KINGDOM	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	
FRANCE	3	4	4	4	4	3	3	3	3	3	3	3	3	3	3	
CANADA	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
SWITZERLAND	2	2	2	2	2	1	1	1	1	1	1	1	1	1	2	
ITALY	1	1	2	2	2	1	2	2	1	1	1	1	1	1	1	
NETHERLANDS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
TAIWAN							1	1	1	1	2	2	3	3	1	
SWEDEN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
BELGIUM	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
SOUTH KOREA						1	1	1	1	1	2	2	2	2	1	
AUSTRALIA											1	1	1	0		
FINLAND														0		
DENMARK											1	1	1	1	0	
AUSTRIA															0	
ISRAEL															0	
U.S.S.R.															0	
HUNGARY															0	
SPAIN															0	
NORWAY															0	
SOUTH AFRICA															0	
INDIA															0	
RUSSIAN FEDERATION															0	
MEXICO															0	
SINGAPORE															0	
CHINA P.REP.															0	
CZECHOSLOVAKIA															0	
IRELAND															0	
NEW ZEALAND															0	
BRAZIL															0	
VENEZUELA															0	
POLAND															0	
CHINA,HONG KONG S.A.R															0	
LUXEMBOURG															0	
BULGARIA															0	
Others ( 89 )															0	

## Ownership:

U.S. Corporations	53	49	49	48	49	49	49	50	48	50	51	50	50	48	51
U.S. Government	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1
U.S. Individuals	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Foreign Corporations	36	42	42	43	42	41	42	42	43	41	41	41	41	44	40
Foreign Government	1	1	1	1	1	1	1								0
Foreign Individuals	3	3	3	3	3	2	2	2	3	2	2	2	2	2	3

## Part A2

Patent Grants as Distributed By Year of Patent Application

## ---- Patents Granted By Date Of Patent Application (Granted: Jan 01, 1977 - Dec 31, 2001) ----

	NUMBER OF PATENTED APPLICATIONS													Total		
	Pre 1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Total
<b>Total</b>	265455	26304	28147	28601	28637	30214	31299	35763	45254	37228	43131	37855	30003	9133	426	677450
U.S. Origin	147629	13341	14254	14953	15139	16139	16809	19245	25353	19074	22627	19512	15226	4525	207	364033
Foreign Origin	117826	12963	13893	13648	13498	14075	14490	16518	19901	18154	20504	18343	14777	4608	219	313417
JAPAN	40550	5555	6065	6121	6266	6416	6197	6848	7650	7382	8169	6896	5293	1751	87	121246
GERMANY	27978	2718	2788	2573	2386	2523	2605	2813	3395	2915	3297	2830	2355	716	41	61933
UNITED KINGDOM	11068	917	1009	921	800	828	963	1065	1412	1163	1320	1088	886	257	7	23704
FRANCE	9426	931	924	981	997	1006	982	1173	1561	1239	1426	1258	947	264	11	23126
CANADA	3847	478	497	474	515	551	591	749	972	763	841	792	607	180	5	11862
SWITZERLAND	6123	516	463	395	425	416	449	512	554	427	499	446	337	104	3	11669
ITALY	3667	391	431	449	419	463	468	434	597	465	504	438	381	112	1	9220
NETHERLANDS	2822	297	344	316	278	306	296	278	380	354	437	351	277	76	4	6816
TAIWAN	133	34	53	96	120	148	241	366	437	695	874	1275	1311	362	27	6172
SWEDEN	2186	147	182	146	168	170	197	282	363	265	362	307	227	73	3	5078
BELGIUM	1740	144	183	179	192	177	232	312	452	369	369	346	252	94	6	5047
SOUTH KOREA	93	51	76	90	139	184	242	372	485	704	719	751	675	220	14	4815
AUSTRALIA	963	94	115	106	97	135	137	174	235	198	211	187	134	23	1	2810
FINLAND	701	110	110	125	132	103	122	165	165	153	163	153	114	27		2343
DENMARK	609	71	65	86	79	94	122	140	270	149	238	206	144	47		2320
AUSTRIA	815	85	101	121	82	77	97	132	164	128	156	129	94	30		2211
ISRAEL	646	80	96	90	74	96	116	162	196	142	162	155	123	40	1	2179
U.S.S.R.	1083	40	43	42	27	19	11	4	7	2	2	1				1281
HUNGARY	824	49	55	63	52	35	35	32	30	15	18	20	17	9		1254
SPAIN	273	33	42	38	43	43	51	64	83	71	87	71	39	17		955
NORWAY	266	29	31	33	27	37	36	43	70	50	50	46	51	11	1	781
SOUTH AFRICA	307	31	41	33	28	24	35	42	29	33	31	42	35	5		716
INDIA	109	16	20	18	15	30	22	29	37	59	98	94	79	50	1	677
RUSSIAN FEDERATION					1	10	40	56	68	91	76	68	52	16		478
MEXICO	190	14	16	16	20	22	15	23	20	28	19	26	14	5		428
SINGAPORE	7	1	4	6	7	9	10	24	25	57	55	60	90	48	5	408
CHINA P.REP.	33	19	20	18	17	20	30	22	41	39	41	45	44	14		403
CZECHOSLOVAKIA	283	6	18	8	8	9	6	5	7	2	1	4				357
IRELAND	95	22	14	15	14	11	18	21	21	16	19	23	11	4		304
NEW ZEALAND	70	12	11	14	4	14	10	25	17	23	33	26	18	6		283
BRAZIL	76	10	13	4	12	14	18	19	18	19	24	23	16	1		267
VENEZUELA	67	8	9	13	7	18	15	14	17	18	24	21	15	1		247
POLAND	117	6	1	1	5	6	7	6	7	9	7	6	5	1		184
CHINA,HONG KONG S.A.R	26	4	3	4	4	9	13	4	10	23	22	18	3	1		148
LUXEMBOURG	74	2	4	5	6	2	2	7	5	9	11	9	3			139
BULGARIA	103	10	5	4	1	2		2	3	1	2		1			134
Others ( 89 )	456	32	41	44	31	53	63	90	104	91	136	128	112	41		1422
<b>Ownership:</b>																
U.S. Corporations	139393	12684	13441	14074	14121	15073	15685	17887	23790	18053	21341	18496	14361	4284	187	342870
U.S. Government	4380	341	366	427	400	439	424	437	489	324	347	275	201	71	2	8923
U.S. Individuals	13397	1249	1365	1332	1414	1423	1601	1847	2165	1778	2079	1727	1415	462	32	33286
Foreign Corporations	98677	11176	12037	11885	11874	12443	12781	14613	17695	16083	18280	16504	13288	4123	194	271653
Foreign Government	1786	163	165	200	167	137	95	117	133	112	90	51	38	13		3267
Foreign Individuals	7822	691	773	683	661	699	713	862	982	878	994	802	700	180	11	17451



Part B  
Ranked Listing of Organizations with PATENT GRANTS  
As Distributed By Year of Patent Grant  
and As Distributed By Year of Patent Application

---- Technology Assessment and Forecast Report ----

CHEMICAL CLASSES (12-31-2001)

Page B - 1

---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

Pre

	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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BAYER AKTIENGESELLSCHAFT

Patents By Year of Grant:	4175	428	454	476	477	465	426	334	321	316	345	371	328	287	348	9551
Patents By Year of Application:	4940	430	498	474	380	405	347	337	380	392	360	242	256	98	12	9551

E. I. DU PONT DE NEMOURS AND COMPANY

Patents By Year of Grant:	3042	308	347	388	470	490	476	399	387	338	286	356	313	298	307	8205
Patents By Year of Application:	3613	350	455	516	444	412	390	377	376	335	360	280	213	76	8	8205

BASF AKTIENGESELLSCHAFT

Patents By Year of Grant:	2416	273	338	383	366	377	344	309	296	315	273	395	404	501	473	7463
Patents By Year of Application:	2935	376	373	370	321	306	322	325	374	349	459	468	342	133	10	7463

GENERAL ELECTRIC COMPANY

Patents By Year of Grant:	2964	242	300	252	301	360	301	295	280	299	227	227	236	209	304	6797
Patents By Year of Application:	3426	281	323	303	301	281	299	315	292	244	231	232	195	69	5	6797

DOW CHEMICAL COMPANY

Patents By Year of Grant:	3042	387	392	368	296	287	304	247	205	170	144	161	132	124	158	6417
Patents By Year of Application:	3727	359	354	271	261	249	242	204	205	153	137	107	105	42	1	6417

EASTMAN KODAK COMPANY

Patents By Year of Grant:	1729	176	278	286	331	289	445	374	349	306	309	428	400	340	297	6337
Patents By Year of Application:	2055	311	316	360	340	418	341	311	296	464	400	385	241	97	2	6337

CIBA-GEIGY CORPORATION

Patents By Year of Grant:	3173	274	331	392	395	308	319	290	264	267	232	15	3	2	0	6265
Patents By Year of Application:	3738	367	343	336	303	281	280	304	272	40	1	0	0	0	0	6265

FUJI PHOTO FILM CO., LTD

Patents By Year of Grant:	1853	281	386	383	403	342	392	347	301	295	224	245	235	241	246	6174
Patents By Year of Application:	2489	377	385	366	366	323	300	294	278	274	289	191	161	78	3	6174

HOECHST AKTIENGESELLSCHAFT

Patents By Year of Grant:	2385	209	239	258	268	318	331	308	287	327	338	314	147	82	18	5829
Patents By Year of Application:	2817	279	278	271	270	343	305	343	471	209	195	36	11	1	0	5829

MOBIL OIL CORP.

Patents By Year of Grant:	2061	158	257	260	301	240	230	235	162	143	80	58	61	61	44	4351
Patents By Year of Application:	2409	255	290	245	254	231	187	180	113	45	54	55	31	2	0	4351

MINNESOTA MINING AND MANUFACTURING COMPANY

Patents By Year of Grant:	1127	149	204	180	184	219	271	290	336	335	365	310	216	21	10	4217
Patents By Year of Application:	1448	191	169	236	230	269	307	360	462	330	189	22	3	1	0	4217

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Pre

	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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INTERNATIONAL BUSINESS MACHINES CORPORATION

Patents By Year of Grant:	1100	94	95	81	116	119	154	186	163	206	194	240	347	415	527	4037
Patents By Year of Application:	1265	86	106	86	194	178	154	218	277	259	386	377	357	92	2	4037

PROCTER + GAMBLE COMPANY

Patents By Year of Grant:	843	70	111	99	103	124	116	144	174	247	306	348	412	348	316	3761
Patents By Year of Application:	1017	88	103	113	115	129	183	249	345	417	406	266	249	80	1	3761

PHILLIPS PETROLEUM COMPANY

Patents By Year of Grant:	2237	120	121	109	142	159	183	136	96	80	63	63	60	103	68	3740
Patents By Year of Application:	2464	111	105	170	156	160	111	86	113	49	59	98	45	13	0	3740

MERCK + CO., INC.

Patents By Year of Grant:	1428	121	169	131	150	157	211	159	119	122	159	176	212	176	181	3671
Patents By Year of Application:	1692	120	129	161	191	220	126	155	156	139	213	189	132	47	1	3671

SHELL OIL COMPANY

Patents By Year of Grant:	1366	154	302	228	230	228	185	159	118	92	99	125	110	93	88	3577
Patents By Year of Application:	1687	241	220	245	200	171	143	130	121	133	112	91	66	16	1	3577

EXXON RESEARCH + ENGINEERING CO.

Patents By Year of Grant:	2171	97	119	124	125	107	105	116	78	66	64	97	118	99	66	3552
Patents By Year of Application:	2381	94	114	122	114	103	94	83	90	71	116	110	57	3	0	3552

IMPERIAL CHEMICAL INDUSTRIES PLC

Patents By Year of Grant:	1514	149	136	154	154	172	206	113	81	56	50	54	38	36	34	2947
Patents By Year of Application:	1811	148	174	138	170	150	84	64	71	47	34	30	22	4	0	2947

AMERICAN CYANAMID COMPANY

Patents By Year of Grant:	1533	88	104	125	96	112	111	126	77	100	102	103	105	63	64	2909
Patents By Year of Application:	1764	85	81	112	104	115	118	102	173	46	76	60	56	17	0	2909

SUMITOMO CHEMICAL COMPANY, LIMITED

Patents By Year of Grant:	1021	112	138	110	139	129	143	160	134	132	117	138	125	139	159	2896
Patents By Year of Application:	1247	124	137	119	130	154	143	174	145	132	132	111	109	39	0	2896

CANON KABUSHIKI KAISHA

Patents By Year of Grant:	457	86	137	133	114	148	169	172	175	224	207	212	196	195	226	2851
Patents By Year of Application:	656	128	130	152	157	191	167	236	299	210	222	165	117	19	2	2851

MONSANTO COMPANY, INC.

Patents By Year of Grant:	1584	64	85	78	124	122	99	73	71	77	95	69	80	76	62	2759
Patents By Year of Application:	1727	91	114	112	93	84	81	80	113	75	81	54	44	9	1	2759

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----- Organizational Patenting

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## ---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre 1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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## PFIZER INC.

Patents By Year of Grant:	824	59	77	80	88	79	64	72	75	81	99	114	109	151	172	2144
Patents By Year of Application:	928	79	92	92	68	86	81	113	107	69	127	85	158	51	8	2144

## UNIVERSITY OF CALIFORNIA, THE REGENTS OF

Patents By Year of Grant:	227	32	43	32	54	49	61	87	113	149	177	238	285	296	288	2131
Patents By Year of Application:	328	31	51	60	66	68	152	194	302	215	245	234	153	31	1	2131

## UNITED STATES OF AMERICA, DEPARTMENT OF ENERGY

Patents By Year of Grant:	1154	114	101	96	73	105	71	66	46	27	27	22	34	29	33	1998
Patents By Year of Application:	1336	98	94	89	90	68	55	31	25	27	34	22	23	6	0	1998

## AMOCO CORPORATION

Patents By Year of Grant:	897	115	142	139	105	152	101	66	42	52	48	55	10	0	0	1924
Patents By Year of Application:	1129	147	127	140	103	66	57	51	52	32	19	1	0	0	0	1924

## UPJOHN COMPANY

Patents By Year of Grant:	1668	15	27	24	19	30	30	23	21	32	21	1	1	0	1	1913
Patents By Year of Application:	1715	18	22	22	30	28	29	25	22	2	0	0	0	0	0	1913

## TEXACO INC.

Patents By Year of Grant:	1152	66	95	84	67	78	69	61	71	46	14	24	21	18	10	1876
Patents By Year of Application:	1299	77	72	71	77	65	62	56	30	19	17	22	7	2	0	1876

## DOW CORNING CORPORATION

Patents By Year of Grant:	455	75	97	115	129	139	93	123	103	102	84	103	102	73	57	1850
Patents By Year of Application:	579	102	136	134	112	99	122	119	107	104	85	85	53	12	1	1850

## KONICA CORPORATION

Patents By Year of Grant:	518	77	91	110	129	98	126	120	98	76	62	91	83	74	70	1823
Patents By Year of Application:	660	105	103	133	112	98	92	113	72	87	100	73	56	18	1	1823

## TEXAS INSTRUMENTS, INCORPORATED

Patents By Year of Grant:	312	32	105	65	78	95	100	112	134	112	116	84	104	156	181	1786
Patents By Year of Application:	412	95	71	95	92	111	113	177	143	89	127	131	109	18	3	1786

## NEC CORPORATION

Patents By Year of Grant:	90	16	19	15	20	30	39	97	107	124	147	185	264	301	325	1779
Patents By Year of Application:	117	19	22	22	43	87	73	159	171	197	308	282	198	79	2	1779

## WESTINGHOUSE ELECTRIC CORP.

Patents By Year of Grant:	931	143	134	109	95	86	70	71	52	35	21	20	5	3	0	1775
Patents By Year of Application:	1173	105	111	94	61	63	63	49	27	17	11	1	0	0	0	1775

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Pre

	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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**HOECHST CELANESE CORPORATION**

Patents By Year of Grant:	627	96	112	177	115	122	99	88	71	70	72	63	22	10	3	1747
Patents By Year of Application:	836	126	135	123	108	85	73	75	88	56	37	3	2	0	0	1747

**SIEMENS AKTIENGESELLSCHAFT**

Patents By Year of Grant:	612	56	91	69	47	48	66	65	70	51	61	106	134	143	100	1719
Patents By Year of Application:	719	77	67	54	54	65	64	69	76	96	150	119	92	17	0	1719

**SHIN ETSU CHEMICAL CO., LTD.**

Patents By Year of Grant:	258	60	49	58	107	131	161	150	128	122	88	90	91	102	118	1713
Patents By Year of Application:	337	59	97	141	121	149	127	149	133	91	82	102	85	38	2	1713

**L'OREAL S.A.**

Patents By Year of Grant:	317	30	68	55	68	52	59	43	47	90	148	146	199	168	201	1691
Patents By Year of Application:	427	62	48	53	51	54	50	95	191	165	198	131	130	35	1	1691

**WARNER-LAMBERT COMPANY**

Patents By Year of Grant:	547	105	105	101	105	83	82	66	69	59	76	51	74	76	73	1672
Patents By Year of Application:	743	98	88	99	75	60	76	87	88	33	53	83	61	26	2	1672

**HENKEL KOMMANDITGESELLSCHAFT AUF AKTIEN(HENKEL KGAA)**

Patents By Year of Grant:	537	93	116	104	57	40	64	93	95	100	66	79	80	49	84	1657
Patents By Year of Application:	725	111	79	30	55	85	85	114	82	101	80	50	53	7	0	1657

**ABBOTT LABORATORIES**

Patents By Year of Grant:	391	26	30	42	55	93	91	99	82	130	159	122	122	106	105	1653
Patents By Year of Application:	458	44	65	58	99	92	98	111	227	130	107	74	59	29	2	1653

**ROHM AND HAAS COMPANY**

Patents By Year of Grant:	629	18	32	32	48	64	114	123	115	95	62	69	81	76	93	1651
Patents By Year of Application:	688	23	48	73	98	103	120	99	100	55	72	77	68	26	1	1651

**MOTOROLA, INC.**

Patents By Year of Grant:	206	54	51	45	61	77	101	96	128	126	148	162	140	141	98	1634
Patents By Year of Application:	288	36	62	75	90	103	100	154	174	169	191	124	44	24	0	1634

**AT&T CORP.**

Patents By Year of Grant:	984	44	54	65	76	83	84	91	88	40	1	0	0	0	0	1610
Patents By Year of Application:	1073	53	78	73	88	87	94	54	10	0	0	0	0	0	0	1610

**MITSUBISHI DENKI KABUSHIKI KAISHA**

Patents By Year of Grant:	197	60	62	82	101	116	140	100	99	85	76	85	112	102	145	1562
Patents By Year of Application:	297	78	107	99	141	107	93	105	108	96	114	93	84	38	2	1562

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Pre

	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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**ADVANCED MICRO DEVICES, INC.**

Patents By Year of Grant:	52	6	10	10	10	8	6	15	18	25	58	132	273	420	509	1552
Patents By Year of Application:	66	8	15	7	3	14	14	30	83	147	359	365	304	131	6	1552

**UNITED STATES OF AMERICA, NAVY**

Patents By Year of Grant:	653	24	15	41	72	78	89	98	68	62	58	76	93	56	67	1550
Patents By Year of Application:	738	36	52	80	72	88	96	64	72	68	70	54	42	18	0	1550

**TAKEDA CHEMICAL INDUSTRIES LTD.**

Patents By Year of Grant:	513	56	77	82	48	65	90	66	69	92	75	69	76	70	101	1549
Patents By Year of Application:	649	72	80	60	74	66	82	88	96	82	65	42	67	26	0	1549

**CHEVRON RESEARCH & TECHNOLOGY CO.**

Patents By Year of Grant:	1124	65	45	39	52	57	52	52	22	3	5	0	1	0	2	1519
Patents By Year of Application:	1242	27	40	68	38	59	34	7	2	1	0	0	0	1	0	1519

**CORNING INCORPORATED**

Patents By Year of Grant:	661	59	45	63	48	63	70	78	43	54	46	40	51	67	112	1500
Patents By Year of Application:	748	55	56	61	60	74	61	69	54	35	54	65	87	21	0	1500

**W. R. GRACE & CO.-CONN.**

Patents By Year of Grant:	509	52	85	87	87	108	102	105	72	68	58	46	23	15	28	1445
Patents By Year of Application:	632	91	89	90	119	82	96	59	91	37	22	18	13	5	1	1445

**GOODYEAR TIRE + RUBBER COMPANY**

Patents By Year of Grant:	669	48	45	49	56	47	52	41	41	47	63	69	51	62	78	1418
Patents By Year of Application:	742	50	50	55	50	47	33	42	59	66	78	64	63	13	6	1418

**COLGATE-PALMOLIVE COMPANY**

Patents By Year of Grant:	502	47	77	40	51	43	44	45	56	64	65	95	118	81	83	1411
Patents By Year of Application:	607	50	58	40	52	35	54	80	48	89	99	63	72	51	13	1411

**UNITED MICROELECTRONICS CORPORATION**

Patents By Year of Grant:	0	0	0	0	0	2	7	40	112	111	68	82	182	324	471	1399
Patents By Year of Application:	0	0	0	2	2	5	54	159	91	107	153	390	333	96	7	1399

**BRISTOL-MYERS SQUIBB COMPANY**

Patents By Year of Grant:	376	42	48	59	65	59	50	56	68	71	98	100	101	84	74	1351
Patents By Year of Application:	464	52	46	81	42	63	96	91	111	76	69	69	55	36	0	1351

**EXXON CHEMICALS PATENTS INC.**

Patents By Year of Grant:	34	30	63	71	108	88	110	111	122	102	111	118	106	107	65	1346
Patents By Year of Application:	127	82	84	110	79	93	135	104	169	94	156	78	32	3	0	1346

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	Pre															
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**UNITED STATES OF AMERICA, HEALTH & HUMAN SERVICES**

Patents By Year of Grant:	210	22	26	30	31	60	71	87	82	97	138	159	132	91	97	1333
Patents By Year of Application:	278	43	58	68	72	117	109	162	189	61	87	48	31	10	0	1333

**AIR PRODUCTS AND CHEMICALS, INC.**

Patents By Year of Grant:	349	50	81	79	96	67	86	99	60	58	44	62	60	81	55	1327
Patents By Year of Application:	453	91	72	82	71	97	74	69	62	53	67	62	58	16	0	1327

**SONY CORPORATION**

Patents By Year of Grant:	172	15	17	11	17	22	62	83	87	95	108	119	172	158	149	1287
Patents By Year of Application:	201	12	19	20	45	103	81	95	140	152	170	128	99	22	0	1287

**E. R. SQUIBB + SONS, INC.**

Patents By Year of Grant:	820	62	46	43	45	66	62	40	23	21	21	16	8	3	2	1278
Patents By Year of Application:	924	36	58	57	69	55	31	11	24	5	7	1	0	0	0	1278

**LEVER BROTHERS COMPANY, DIVISION OF CONOPCO, INC.**

Patents By Year of Grant:	577	42	45	54	53	48	41	51	67	53	50	59	58	32	26	1256
Patents By Year of Application:	652	52	57	53	46	34	69	50	63	72	59	36	9	4	0	1256

**MITSUI TOATSU CHEMICALS INC.**

Patents By Year of Grant:	312	58	76	89	81	123	132	99	89	76	69	43	2	2	0	1251
Patents By Year of Application:	436	77	108	109	104	104	95	80	95	36	7	0	0	0	0	1251

**AMERICAN HOME PRODUCTS CORPORATION**

Patents By Year of Grant:	461	63	71	61	44	55	63	31	58	95	34	48	46	46	72	1248
Patents By Year of Application:	569	43	62	43	59	57	44	72	95	38	35	39	65	25	2	1248

**TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.**

Patents By Year of Grant:	0	0	0	0	3	3	7	10	21	57	101	153	195	285	398	1233
Patents By Year of Application:	0	0	0	5	7	8	11	25	82	180	202	264	351	87	11	1233

**OLIN CORPORATION**

Patents By Year of Grant:	730	38	46	42	70	78	58	56	23	29	19	10	10	5	4	1218
Patents By Year of Application:	802	39	59	80	59	56	37	33	23	12	9	5	4	0	0	1218

**U.S. PHILIPS CORPORATION**

Patents By Year of Grant:	540	52	59	68	59	39	42	32	39	34	33	56	62	45	58	1218
Patents By Year of Application:	633	64	60	50	44	37	33	36	50	57	64	43	41	5	1	1218

**FUJITSU LIMITED**

Patents By Year of Grant:	216	22	34	36	45	54	67	67	83	85	83	92	98	107	87	1176
Patents By Year of Application:	261	38	43	56	71	58	92	96	125	93	101	91	39	12	0	1176

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	Pre 1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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## SUMITOMO ELECTRIC INDUSTRIES CO., LTD.

Patents By Year of Grant:	207	39	45	52	41	59	112	102	89	78	84	79	86	52	48	1173
Patents By Year of Application:	283	52	49	53	79	131	76	99	136	61	71	46	31	5	1	1173

## ETHYL CORPORATION

Patents By Year of Grant:	520	49	83	105	117	93	84	49	8	11	14	10	8	11	7	1169
Patents By Year of Application:	615	99	116	97	89	68	26	5	17	10	11	9	5	2	0	1169

## ASAHI KASEI KOGYO KABUSHIKI KAISHA

Patents By Year of Grant:	560	46	43	33	31	31	54	49	28	27	24	48	56	62	54	1146
Patents By Year of Application:	643	38	43	30	50	38	26	37	27	41	71	49	37	16	0	1146

## STAUFFER CHEMICAL COMPANY

Patents By Year of Grant:	1033	69	36	0	2	0	0	0	0	0	0	0	0	0	0	1140
Patents By Year of Application:	1127	12	1	0	0	0	0	0	0	0	0	0	0	0	0	1140

## SANDOZ LTD.

Patents By Year of Grant:	614	53	58	34	49	37	45	40	41	83	52	20	10	0	0	1136
Patents By Year of Application:	717	45	41	42	47	36	45	63	76	16	8	0	0	0	0	1136

## INTERNATIONAL FLAVORS + FRAGRANCES INC

Patents By Year of Grant:	840	22	31	36	34	22	20	25	21	17	12	13	3	17	19	1132
Patents By Year of Application:	875	28	30	29	28	13	29	25	15	16	9	8	20	6	1	1132

## MERCK PATENT GESELLSCHAFT MIT BESCHRANKTER HAFTUNG

Patents By Year of Grant:	267	46	51	30	34	50	78	57	65	50	60	93	52	68	72	1073
Patents By Year of Application:	376	36	47	43	64	56	57	67	78	81	48	55	51	12	2	1073

## INSTITUT FRANCAIS DU PETROLE

Patents By Year of Grant:	298	35	24	29	47	32	37	47	45	48	53	82	74	114	107	1072
Patents By Year of Application:	357	29	34	37	38	47	46	54	79	63	104	97	75	12	0	1072

## SAMSUNG ELECTRONICS CO., LTD.

Patents By Year of Grant:	1	2	1	8	18	24	35	42	39	36	75	148	176	211	245	1061
Patents By Year of Application:	3	10	8	23	39	40	39	38	83	172	157	210	192	43	4	1061

## G. D. SEARLE &amp; CO.

Patents By Year of Grant:	267	34	33	34	38	46	92	56	90	63	75	59	61	61	39	1048
Patents By Year of Application:	332	39	38	33	66	87	74	87	118	52	43	42	28	9	0	1048

## KAO KABUSHIKI KAISHA (KAO CORPORATION)

Patents By Year of Grant:	90	42	57	50	58	75	61	65	64	57	87	108	84	68	75	1041
Patents By Year of Application:	182	53	57	54	83	70	56	68	92	100	90	86	31	16	3	1041

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CHEMICAL CLASSES (12-31-2001)

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---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

Pre

	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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SCHERING AKTIENGESELLSCHAFT

Patents By Year of Grant:	431	37	48	70	39	51	37	30	45	30	42	52	43	53	33	1041
Patents By Year of Application:	532	53	49	55	35	35	44	45	62	35	29	36	22	9	0	1041

NALCO CHEMICAL COMPANY

Patents By Year of Grant:	357	51	53	52	45	61	53	63	66	29	34	31	32	38	37	1002
Patents By Year of Application:	435	57	48	46	59	56	71	48	47	34	30	35	27	9	0	1002

FMC CORPORATION

Patents By Year of Grant:	490	39	36	40	37	30	38	35	28	39	37	47	36	38	30	1000
Patents By Year of Application:	559	32	44	28	45	25	34	43	43	43	46	36	15	7	0	1000

AGENCY OF INDUSTRIAL SCIENCE & TECHNOLOGY

Patents By Year of Grant:	288	55	67	63	62	49	48	36	28	39	55	47	39	56	53	985
Patents By Year of Application:	392	70	54	52	47	42	29	38	56	53	50	45	39	18	0	985

DEGUSSA AKTIENGESELLSCHAFT

Patents By Year of Grant:	316	48	50	48	59	50	57	60	39	48	43	58	47	18	34	975
Patents By Year of Application:	387	63	45	60	45	67	50	48	47	56	59	21	15	12	0	975

SCHERING CORP.

Patents By Year of Grant:	285	40	50	30	51	32	31	27	48	29	68	75	81	52	70	969
Patents By Year of Application:	384	35	34	39	29	37	44	54	105	44	62	45	45	10	2	969

UNITED STATES OF AMERICA, ARMY

Patents By Year of Grant:	464	17	42	31	44	37	38	31	30	22	43	39	40	37	47	962
Patents By Year of Application:	515	27	37	43	31	32	30	44	52	46	32	42	25	6	0	962

UNITED STATES OF AMERICA, DEPARTMENT OF AGRICULTURE

Patents By Year of Grant:	381	27	35	35	35	35	44	29	38	30	38	62	58	46	60	953
Patents By Year of Application:	445	36	41	38	43	31	34	36	55	59	50	39	31	15	0	953

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Patents By Year of Grant:	305	39	52	46	50	47	53	36	28	51	41	43	56	46	58	951
Patents By Year of Application:	416	47	56	39	37	42	47	60	50	30	48	44	32	3	0	951

AGFA-GEVAERT N.V.

Patents By Year of Grant:	189	12	28	12	25	22	37	43	65	59	79	67	77	126	102	943
Patents By Year of Application:	218	21	14	28	35	31	47	72	78	102	78	111	83	25	0	943

UNITED TECHNOLOGIES CORPORATION

Patents By Year of Grant:	429	36	50	37	29	44	41	61	35	38	33	23	32	22	23	933
Patents By Year of Application:	525	40	32	34	46	50	39	30	42	25	32	24	13	1	0	933

---- Technology Assessment and Forecast Report ----

CHEMICAL CLASSES (12-31-2001)

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---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

Pre

	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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BASF CORP.

Patents By Year of Grant:	56	37	47	34	41	49	81	58	66	86	77	90	79	75	55	931
Patents By Year of Application:	132	38	38	41	68	73	59	67	136	84	96	58	32	9	0	931

BOEHRINGER MANNHEIM G.M.B.H.

Patents By Year of Grant:	280	36	62	50	53	52	47	56	55	48	59	69	38	12	5	922
Patents By Year of Application:	391	61	54	44	53	41	52	63	66	54	32	8	2	1	0	922

B. F. GOODRICH CO.

Patents By Year of Grant:	511	46	48	50	55	48	47	28	11	13	10	13	15	12	14	921
Patents By Year of Application:	590	52	75	37	35	36	18	13	17	10	18	9	10	1	0	921

STANDARD OIL COMPANY

Patents By Year of Grant:	590	60	58	42	28	35	19	11	9	7	15	10	11	11	8	914
Patents By Year of Application:	696	46	30	35	26	10	3	10	16	10	9	12	7	4	0	914

ATLANTIC RICHFIELD COMPANY

Patents By Year of Grant:	727	37	21	14	8	10	17	23	9	5	8	6	13	10	5	913
Patents By Year of Application:	781	17	9	8	10	24	16	7	6	10	7	9	8	1	0	913

RICOH COMPANY, LTD.

Patents By Year of Grant:	239	30	41	40	41	50	49	44	40	41	48	52	63	66	53	897
Patents By Year of Application:	300	42	42	53	43	49	35	53	54	48	67	54	42	15	0	897

TORAY INDUSTRIES INC.

Patents By Year of Grant:	322	33	30	33	30	33	39	36	35	29	56	40	52	58	60	886
Patents By Year of Application:	380	38	29	35	30	36	47	44	40	58	56	54	32	7	0	886

OWENS-CORNING FIBERGLAS CORPORATION

Patents By Year of Grant:	526	27	23	13	12	13	8	19	10	28	49	48	45	32	31	884
Patents By Year of Application:	567	24	9	15	9	10	15	33	46	58	50	25	19	3	1	884

SMITHKLINE BEECHAM CORPORATION

Patents By Year of Grant:	0	0	0	12	15	10	16	7	21	20	66	94	176	192	242	871
Patents By Year of Application:	0	9	15	16	7	14	19	39	85	64	227	189	155	30	2	871

MITSUI PETROCHEMICAL INDUSTRIES LTD.

Patents By Year of Grant:	207	23	43	77	90	63	73	66	51	39	70	49	10	8	1	870
Patents By Year of Application:	263	95	82	61	56	59	54	56	76	44	23	0	1	0	0	870

UNIVERSITY OF TEXAS

Patents By Year of Grant:	57	12	26	38	62	56	66	71	62	60	61	71	64	65	69	840
Patents By Year of Application:	133	39	52	57	58	74	78	81	95	41	57	41	26	7	1	840

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CHEMICAL CLASSES (12-31-2001)

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---- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre															
	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL

**MILES INC.**

Patents By Year of Grant:	367	46	44	35	30	85	101	74	49	1	5	0	0	0	0	837
Patents By Year of Application:	473	28	37	52	91	74	53	24	5	0	0	0	0	0	0	837

**UNION OIL COMPANY OF CALIFORNIA**

Patents By Year of Grant:	383	60	65	52	77	66	36	32	18	7	12	10	5	9	1	833
Patents By Year of Application:	506	65	66	53	47	30	23	13	11	3	8	7	1	0	0	833

**TEIJIN LIMITED**

Patents By Year of Grant:	325	36	32	28	25	27	51	37	40	32	43	34	35	38	48	831
Patents By Year of Application:	400	23	21	36	41	30	32	52	50	32	30	38	36	10	0	831

**NIPPON STEEL CORP.**

Patents By Year of Grant:	282	32	58	41	42	32	46	34	36	41	52	44	32	28	27	827
Patents By Year of Application:	351	42	33	57	38	41	38	39	57	44	40	18	21	7	1	827

**SHARP KABUSHIKI KAISHA (SHARP CORPORATION)**

Patents By Year of Grant:	78	27	29	25	37	59	53	65	54	43	62	65	74	81	67	819
Patents By Year of Application:	135	20	36	38	65	72	60	46	72	70	71	68	41	25	0	819

**HERCULES INCORPORATED**

Patents By Year of Grant:	378	26	40	30	51	33	25	29	24	31	33	29	22	31	36	818
Patents By Year of Application:	436	43	41	40	34	23	21	38	34	31	29	29	15	4	0	818

**FORD MOTOR COMPANY**

Patents By Year of Grant:	440	27	27	17	22	40	49	40	28	35	27	18	19	14	5	808
Patents By Year of Application:	493	15	19	40	46	38	33	35	26	19	23	15	6	0	0	808

**MITSUBISHI GAS-CHEMICAL COMPANY, INC.**

Patents By Year of Grant:	244	17	23	43	47	42	43	47	45	33	33	43	60	37	47	804
Patents By Year of Application:	285	30	44	49	41	41	42	39	39	52	45	42	40	15	0	804

**ROUSSEL-UCLAF**

Patents By Year of Grant:	383	24	42	32	40	42	40	37	57	34	26	39	8	0	0	804
Patents By Year of Application:	448	40	32	44	27	47	44	41	44	28	9	0	0	0	0	804

**NOVO NORDISK A/S**

Patents By Year of Grant:	0	0	0	1	21	25	37	45	28	55	95	122	160	132	81	802
Patents By Year of Application:	6	4	16	31	32	40	49	70	145	71	143	123	58	14	0	802

**GENERAL MOTORS CORPORATION**

Patents By Year of Grant:	338	29	44	41	28	49	49	40	35	34	31	24	20	24	13	799
Patents By Year of Application:	389	50	24	37	50	56	38	34	32	24	27	24	12	2	0	799

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CHEMICAL CLASSES (12-31-2001)

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## ---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre 1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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## APPLIED MATERIALS, INC.

Patents By Year of Grant:	10	4	3	9	7	21	27	36	36	43	40	76	108	177	201	798
Patents By Year of Application:	14	5	11	17	33	30	47	50	73	117	160	127	85	29	0	798

## FUJISAWA PHARMACEUTICAL CO., LTD.

Patents By Year of Grant:	324	34	36	51	35	36	47	37	18	31	35	24	21	25	40	794
Patents By Year of Application:	398	36	38	49	32	37	26	33	34	23	23	25	30	10	0	794

## RHONE-POULENC CHIMIE

Patents By Year of Grant:	30	22	48	73	121	75	53	59	46	43	70	79	48	16	11	794
Patents By Year of Application:	88	82	106	94	66	46	45	57	83	64	47	10	5	1	0	794

## NGK INSULATORS LTD.

Patents By Year of Grant:	139	33	65	36	39	46	68	36	32	39	40	46	63	60	49	791
Patents By Year of Application:	215	45	43	48	50	59	30	36	48	54	68	58	29	8	0	791

## BEECHAM GROUP P.L.C.

Patents By Year of Grant:	523	28	49	40	37	34	29	15	8	4	5	6	1	3	4	786
Patents By Year of Application:	607	32	44	37	19	14	13	5	10	1	1	3	0	0	0	786

## CHISSO CORPORATION

Patents By Year of Grant:	179	39	51	43	52	57	39	32	33	21	35	48	41	37	76	783
Patents By Year of Application:	252	66	45	55	25	37	28	30	39	46	48	47	52	12	1	783

## UNITED STATES OF AMERICA, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Patents By Year of Grant:	316	17	31	29	36	45	45	38	34	31	28	30	32	37	22	771
Patents By Year of Application:	356	35	32	40	39	48	34	42	34	30	30	26	16	9	0	771

## ZENECA LIMITED

Patents By Year of Grant:	0	0	0	0	0	0	0	38	81	108	93	137	134	98	79	768
Patents By Year of Application:	1	0	1	0	6	15	92	113	134	121	113	95	59	18	0	768

## BECTON, DICKINSON AND COMPANY

Patents By Year of Grant:	150	16	51	34	29	29	20	43	35	60	85	77	52	38	29	748
Patents By Year of Application:	216	40	21	27	30	28	58	64	74	63	71	24	23	9	0	748

## POLAROID CORPORATION

Patents By Year of Grant:	477	19	24	11	10	14	21	24	31	32	30	20	17	7	8	745
Patents By Year of Application:	520	16	8	9	26	14	29	32	32	24	23	5	2	5	0	745

## UNITED STATES OF AMERICA, AIR FORCE

Patents By Year of Grant:	344	28	38	31	33	31	28	27	26	32	23	16	28	27	26	738
Patents By Year of Application:	397	41	27	37	29	26	24	28	31	23	21	28	18	6	2	738

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CHEMICAL CLASSES (12-31-2001)

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---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

Pre

	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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**SMITHKLINE BECKMAN CORPORATION**

Patents By Year of Grant:	481	44	46	16	7	20	15	19	24	18	16	19	11	0	0	736
Patents By Year of Application:	562	22	17	11	20	27	14	16	26	12	7	2	0	0	0	736

**BRIDGESTONE CORPORATION**

Patents By Year of Grant:	172	26	31	31	26	36	43	34	42	44	32	40	48	46	79	730
Patents By Year of Application:	217	36	30	33	47	37	34	40	47	51	54	64	32	6	2	730

**ALUMINUM COMPANY OF AMERICA**

Patents By Year of Grant:	302	51	46	41	48	38	42	28	21	24	19	26	27	12	2	727
Patents By Year of Application:	398	51	40	44	35	28	19	26	31	20	23	10	2	0	0	727

**HENKEL CORPORATION**

Patents By Year of Grant:	127	5	12	19	15	24	24	36	50	81	57	68	88	58	61	725
Patents By Year of Application:	143	15	17	25	23	35	55	66	82	93	74	52	43	2	0	725

**HYUNDAI ELECTRONICS INDUSTRIES CO., LTD.**

Patents By Year of Grant:	0	0	0	1	8	6	10	29	54	69	65	89	89	93	205	718
Patents By Year of Application:	0	0	5	7	10	12	45	67	79	120	109	80	136	44	4	718

**NESTEC, S.A.**

Patents By Year of Grant:	51	28	34	28	32	44	45	31	44	40	33	60	99	63	75	707
Patents By Year of Application:	113	32	27	30	45	54	32	47	53	67	76	63	48	20	0	707

**AJINOMOTO COMPANY INCORPORATED**

Patents By Year of Grant:	189	24	27	20	30	25	32	39	34	42	36	52	51	46	59	706
Patents By Year of Application:	239	25	29	27	29	36	35	43	47	52	57	32	35	19	1	706

**ASAHI GLASS COMPANY, LTD.**

Patents By Year of Grant:	213	21	19	23	38	32	34	35	27	36	35	49	51	34	58	705
Patents By Year of Application:	247	28	29	39	26	37	32	32	36	50	62	40	37	9	1	705

**SYNTEX (U.S.A) INC.**

Patents By Year of Grant:	322	40	44	34	29	36	38	14	33	23	13	24	20	17	5	692
Patents By Year of Application:	428	36	23	32	26	20	16	34	33	8	18	7	8	2	1	692

**RCA CORPORATION**

Patents By Year of Grant:	675	15	1	0	0	0	0	0	0	0	0	0	0	0	0	691
Patents By Year of Application:	691	0	0	0	0	0	0	0	0	0	0	0	0	0	0	691

**KANEKA FUCHI CHEMICAL INDUSTRY CO., LTD.**

Patents By Year of Grant:	247	45	46	45	51	34	35	44	25	25	29	31	18	12	3	690
Patents By Year of Application:	334	42	53	38	37	37	32	32	22	37	17	8	1	0	0	690

---- Technology Assessment and Forecast Report ----

CHEMICAL CLASSES (12-31-2001)

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---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

Pre

	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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**GENENTECH, INC.**

Patents By Year of Grant:	38	12	15	19	21	35	40	28	28	43	82	133	53	77	64	688
Patents By Year of Application:	86	17	19	34	29	28	45	80	194	30	59	45	17	5	0	688

**COMMISSARIAT A L'ENERGIE ATOMIQUE**

Patents By Year of Grant:	351	29	31	28	18	18	18	17	8	23	22	30	35	23	31	682
Patents By Year of Application:	405	39	6	20	17	19	13	17	25	39	39	14	23	6	0	682

**LUBRIZOL CORPORATION**

Patents By Year of Grant:	214	35	26	29	32	24	31	49	28	33	30	46	30	30	40	677
Patents By Year of Application:	274	25	29	38	29	33	32	45	29	39	41	36	18	6	3	677

**AKZO N.V.**

Patents By Year of Grant:	232	36	53	41	67	71	83	44	34	9	1	0	0	1	1	673
Patents By Year of Application:	322	45	62	65	64	56	41	15	2	0	0	1	0	0	0	673

**DAIKIN INDUSTRIES LIMITED**

Patents By Year of Grant:	200	14	25	38	33	44	40	24	19	21	31	48	33	37	57	664
Patents By Year of Application:	239	24	48	40	33	28	22	29	43	32	40	46	31	8	1	664

**EASTMAN CHEMICAL CO., LTD.**

Patents By Year of Grant:	0	0	0	0	0	1	1	61	88	66	75	57	101	110	103	663
Patents By Year of Application:	1	0	0	1	6	17	76	82	111	62	88	112	78	29	0	663

**3M INNOVATIVE PROPERTIES COMPANY**

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	102	276	283	661
Patents By Year of Application:	1	0	0	1	2	7	5	12	13	43	158	207	165	44	3	661

**WACKER-CHEMIE GMBH**

Patents By Year of Grant:	235	17	29	20	25	16	25	25	29	23	36	30	40	40	64	654
Patents By Year of Application:	262	37	20	18	13	23	36	38	27	33	34	55	38	19	1	654

**WISCONSIN ALUMNI RESEARCH FOUNDATION**

Patents By Year of Grant:	132	17	19	12	25	26	34	29	32	49	43	65	71	45	53	652
Patents By Year of Application:	175	11	20	25	29	28	36	45	72	49	63	49	39	11	0	652

**KUREHA CHEMICAL INDUSTRY CO., LTD.**

Patents By Year of Grant:	395	50	48	49	29	12	4	7	14	14	14	5	2	3	4	650
Patents By Year of Application:	487	45	28	19	6	6	11	15	19	4	3	2	3	2	0	650

**BAYER CORPORATION**

Patents By Year of Grant:	0	0	0	0	0	0	0	0	25	81	82	129	115	116	90	638
Patents By Year of Application:	1	0	0	1	4	3	21	68	130	104	119	113	65	9	0	638

(Granted: Jan 01, 1977 - Dec 31, 2001)													Ranked List of Organizations with 200 or More Patents				
	Organizational Patenting												TOTAL				
	Pre 1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001		
<b>KURARAY CO., LTD.</b>																	
Patents By Year of Grant:	209	23	36	30	39	34	24	45	25	17	21	38	31	30	33	635	
Patents By Year of Application:	264	35	33	44	18	32	26	25	24	31	39	26	25	13	0	635	
<b>HUGHES AIRCRAFT COMPANY</b>																	
Patents By Year of Grant:	235	26	37	32	38	31	39	74	48	33	25	11	0	0	0	629	
Patents By Year of Application:	290	44	28	36	31	55	56	47	35	6	1	0	0	0	0	629	
<b>CIBA SPECIALTY CHEMICALS CORPORATION</b>																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	21	162	180	152	113	628	
Patents By Year of Application:	0	0	0	0	2	2	8	4	35	117	181	163	77	38	1	628	
<b>KIMBERLY-CLARK CORPORATION</b>																	
Patents By Year of Grant:	122	42	56	43	21	33	31	36	42	90	68	14	6	7	6	617	
Patents By Year of Application:	208	46	30	36	30	34	40	71	89	25	3	1	4	0	0	617	
<b>MITSUBISHI RAYON CO., LTD.</b>																	
Patents By Year of Grant:	194	40	38	39	50	59	42	37	18	20	8	6	22	19	24	616	
Patents By Year of Application:	271	31	59	50	42	39	22	17	15	6	27	12	16	9	0	616	
<b>UBE INDUSTRIES LTD.</b>																	
Patents By Year of Grant:	224	29	28	37	36	40	37	25	23	16	22	25	29	21	21	613	
Patents By Year of Application:	278	32	37	43	33	27	16	25	23	26	29	21	14	9	0	613	
<b>GTE PRODUCTS CORPORATION</b>																	
Patents By Year of Grant:	341	60	49	40	52	34	22	8	3	1	0	0	1	0	0	611	
Patents By Year of Application:	411	60	49	44	30	15	2	0	0	0	0	0	0	0	0	611	
<b>NIPPON PAINT CO., LTD.</b>																	
Patents By Year of Grant:	111	22	37	36	37	32	60	54	55	42	33	33	27	17	15	611	
Patents By Year of Application:	171	27	41	43	36	57	52	44	46	38	28	12	13	3	0	611	
<b>KAWASAKI STEEL CORPORATION</b>																	
Patents By Year of Grant:	137	16	29	30	33	30	34	48	34	32	33	34	36	38	43	607	
Patents By Year of Application:	177	25	33	29	38	42	45	32	37	37	37	37	29	8	1	607	
<b>UNION CARBIDE CHEMICALS &amp; PLASTICS TECHNOLOGY CORPORATION</b>																	
Patents By Year of Grant:	0	0	0	0	50	94	91	55	38	36	28	60	52	45	58	607	
Patents By Year of Application:	7	13	44	81	66	70	43	41	46	50	57	37	39	13	0	607	
<b>INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE, TAIWAN</b>																	
Patents By Year of Grant:	10	3	8	9	24	23	39	57	54	39	63	62	72	61	80	604	
Patents By Year of Application:	17	12	14	26	33	42	61	45	71	61	75	67	64	16	0	604	

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CHEMICAL CLASSES (12-31-2001)

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## ---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre 1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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## BAXTER INTERNATIONAL INC.

Patents By Year of Grant:	205	30	26	21	16	17	23	21	12	26	34	49	43	33	44	600
Patents By Year of Application:	261	19	24	11	19	24	28	33	52	37	45	28	15	3	1	600

## SEMICONDUCTOR ENERGY LABORATORY CO., LTD.

Patents By Year of Grant:	41	16	25	19	27	23	37	24	21	35	45	59	86	60	77	595
Patents By Year of Application:	73	22	31	35	29	25	29	52	77	72	76	45	22	7	0	595

## NIPPON OIL COMPANY LTD.

Patents By Year of Grant:	237	25	17	27	25	30	25	35	38	34	28	34	19	13	1	588
Patents By Year of Application:	270	27	37	29	28	25	34	36	44	27	22	9	0	0	0	588

## AKZO NOBEL NV

Patents By Year of Grant:	0	0	0	0	0	0	0	18	53	54	80	98	108	89	84	584
Patents By Year of Application:	0	0	2	2	4	16	38	80	101	72	103	86	60	19	1	584

## FUJI XEROX CO., LTD.

Patents By Year of Grant:	40	9	16	27	31	35	30	46	69	39	57	45	52	47	40	583
Patents By Year of Application:	68	27	30	31	33	44	61	44	60	53	62	34	25	11	0	583

## PIONEER HI-BRED INTERNATIONAL, INC.

Patents By Year of Grant:	1	3	7	1	4	13	5	20	22	52	26	107	92	110	111	574
Patents By Year of Application:	6	10	17	6	6	17	25	29	79	62	75	111	109	22	0	574

## DAICEL CHEMICAL INDUSTRIES LTD.

Patents By Year of Grant:	131	19	21	19	19	29	20	22	48	33	29	48	49	45	40	572
Patents By Year of Application:	172	17	18	22	23	26	31	46	47	36	49	43	30	12	0	572

## IDEMITSU KOSAN COMPANY LIMITED

Patents By Year of Grant:	101	13	25	25	28	43	52	51	58	29	22	27	35	35	28	572
Patents By Year of Application:	131	31	31	41	42	49	57	37	36	26	40	25	20	6	0	572

## HEWLETT-PACKARD COMPANY

Patents By Year of Grant:	60	13	21	17	37	60	51	44	27	37	38	42	47	44	33	571
Patents By Year of Application:	91	22	32	46	56	36	36	38	42	45	54	39	28	5	1	571

## TOYOTA JIDOSHA K.K.

Patents By Year of Grant:	214	21	24	20	16	15	15	19	24	24	14	44	46	45	28	569
Patents By Year of Application:	253	21	17	17	13	18	25	21	31	50	50	31	21	1	0	569

## INCYTE PHARMACEUTICALS, INC.

Patents By Year of Grant:	0	0	0	0	0	4	5	4	3	5	18	107	245	146	29	566
Patents By Year of Application:	1	0	0	4	4	6	0	11	22	87	229	155	46	1	0	566

---- Technology Assessment and Forecast Report ----

CHEMICAL CLASSES (12-31-2001)

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---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

Pre

	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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KYOWA HAKKO KOGYO CO., LTD

Patents By Year of Grant:	137	15	26	25	36	39	29	32	23	31	43	36	38	22	34	566
Patents By Year of Application:	182	27	34	30	26	30	37	24	58	34	34	28	15	7	0	566

AGFA-GEVAERT, AG

Patents By Year of Grant:	272	17	32	25	34	14	12	21	23	15	25	29	35	7	0	561
Patents By Year of Application:	313	28	24	22	16	10	19	30	33	22	31	11	2	0	0	561

TDK CORPORATION

Patents By Year of Grant:	87	30	23	10	13	23	30	20	30	43	37	41	44	64	66	561
Patents By Year of Application:	142	8	20	20	18	28	30	46	36	39	43	66	57	8	0	561

HUELS AKTIENGESELLSCHAFT

Patents By Year of Grant:	30	24	33	50	39	44	40	18	42	36	35	51	54	44	19	559
Patents By Year of Application:	82	36	45	41	42	24	32	40	40	46	70	44	17	0	0	559

BOEING COMPANY

Patents By Year of Grant:	152	28	39	27	30	47	18	14	23	24	26	31	40	25	26	550
Patents By Year of Application:	221	38	34	36	17	22	18	18	43	37	32	23	6	5	0	550

LUCENT TECHNOLOGIES INC.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	29	75	76	126	142	102	550
Patents By Year of Application:	0	0	1	0	4	4	10	33	77	86	98	119	109	9	0	550

ASHLAND OIL INC.

Patents By Year of Grant:	367	60	41	17	10	14	10	12	9	0	1	0	0	0	0	541
Patents By Year of Application:	454	32	13	12	9	7	10	4	0	0	0	0	0	0	0	541

MITSUBISHI CHEMICAL INDUSTRIES LTD.

Patents By Year of Grant:	425	49	46	13	3	1	2	1	0	0	1	0	0	0	0	541
Patents By Year of Application:	506	22	8	3	1	0	0	1	0	0	0	0	0	0	0	541

HOECHST-ROUSSEL PHARMACEUTICALS, INC.

Patents By Year of Grant:	140	40	42	52	57	36	64	25	20	50	7	2	1	0	1	537
Patents By Year of Application:	199	46	60	42	52	47	25	17	47	0	1	0	0	1	0	537

MITSUBISHI CHEMICAL CORPORATION

Patents By Year of Grant:	0	0	1	0	0	0	0	0	22	87	84	104	97	73	69	537
Patents By Year of Application:	1	0	0	0	2	1	19	81	98	104	99	81	38	13	0	537

BETZ LABORATORIES INC.

Patents By Year of Grant:	109	34	38	44	35	71	55	45	50	47	4	0	0	0	0	532
Patents By Year of Application:	152	40	49	39	60	56	54	47	35	0	0	0	0	0	0	532



---- Technology Assessment and Forecast Report ----

CHEMICAL CLASSES (12-31-2001)

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---- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre 1988 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 TOTAL													
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BURROUGHS WELLCOME CO.

Patents By Year of Grant:	230	31	45	32	32	36	16	13	25	9	3	0	1	0	0	473
Patents By Year of Application:	307	34	37	19	25	17	19	13	2	0	0	0	0	0	0	473

CORNELL RESEARCH FOUNDATION INC.

Patents By Year of Grant:	78	9	12	18	18	30	21	23	26	31	37	45	42	38	44	472
Patents By Year of Application:	101	22	17	18	26	23	35	41	55	38	43	35	14	4	0	472

MORTON THIOKOL, INC.

Patents By Year of Grant:	289	38	24	21	11	7	10	11	21	20	7	11	1	1	0	472
Patents By Year of Application:	346	20	18	13	6	9	24	22	8	5	0	1	0	0	0	472

ROCKWELL INTERNATIONAL CORPORATION

Patents By Year of Grant:	291	24	13	13	24	13	17	21	23	14	13	4	1	0	0	471
Patents By Year of Application:	325	18	20	19	19	14	19	16	18	2	0	1	0	0	0	471

EISAI CO., LTD.

Patents By Year of Grant:	153	18	21	16	26	19	17	24	23	30	36	28	17	11	25	464
Patents By Year of Application:	194	16	25	23	17	21	19	26	56	17	19	12	14	5	0	464

HITACHI CHEMICAL COMPANY, LTD.

Patents By Year of Grant:	137	12	14	18	27	22	30	16	26	20	25	21	37	21	31	457
Patents By Year of Application:	162	22	24	18	28	21	25	27	27	25	31	26	15	5	1	457

ARCO CHEMICAL TECHNOLOGY, L.P.

Patents By Year of Grant:	0	0	0	0	0	37	50	41	45	55	67	59	50	34	18	456
Patents By Year of Application:	0	1	1	15	38	45	46	50	74	67	55	38	15	9	2	456

SANYO ELECTRIC CO., LTD.

Patents By Year of Grant:	58	18	18	12	19	16	28	26	30	23	38	22	39	47	61	455
Patents By Year of Application:	84	17	12	24	20	29	35	28	32	36	40	46	44	7	1	455

WESTVACO CORPORATION

Patents By Year of Grant:	139	22	22	18	28	31	24	17	20	23	22	25	21	27	15	454
Patents By Year of Application:	167	23	34	17	26	30	18	18	28	28	24	19	16	6	0	454

SANKYO COMPANY LIMITED

Patents By Year of Grant:	168	16	10	15	20	14	17	20	34	23	38	26	24	17	9	451
Patents By Year of Application:	200	14	14	19	9	23	29	33	44	17	19	17	10	3	0	451

MERRELL DOW PHARMACEUTICALS

Patents By Year of Grant:	73	37	37	46	56	52	48	30	49	22	0	0	0	0	0	450
Patents By Year of Application:	129	43	44	53	52	50	35	33	11	0	0	0	0	0	0	450

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CHEMICAL CLASSES (12-31-2001)

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---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre															
	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL

NATIONAL STARCH AND CHEMICAL INVESTMENT HOLDING CORPORATION

Patents By Year of Grant:	0	0	0	26	39	25	31	32	38	41	40	41	52	33	52	450
Patents By Year of Application:	5	14	46	26	18	30	32	48	51	43	48	51	32	6	0	450

BP CHEMICALS LIMITED

Patents By Year of Grant:	96	24	28	27	26	32	22	18	20	22	24	31	28	23	27	448
Patents By Year of Application:	137	34	25	31	27	11	18	25	39	28	30	19	21	3	0	448

GENERAL FOODS CORPORATION

Patents By Year of Grant:	379	26	28	6	0	0	0	0	0	0	0	0	0	0	0	439
Patents By Year of Application:	421	17	1	0	0	0	0	0	0	0	0	0	0	0	0	439

HONDA GIKEN KOGYO KABUSHIKI KAISHA (HONDA MOTOR CO., LTD.)

Patents By Year of Grant:	74	19	17	22	14	10	19	22	26	27	24	34	35	43	49	435
Patents By Year of Application:	104	23	24	6	17	19	25	29	37	36	40	32	31	12	0	435

JOHNS HOPKINS UNIVERSITY

Patents By Year of Grant:	37	5	6	9	10	8	23	16	18	19	33	64	73	56	56	433
Patents By Year of Application:	53	13	12	9	15	15	24	39	78	44	42	60	27	2	0	433

NATIONAL RESEARCH DEVELOPMENT CORPORATION

Patents By Year of Grant:	278	17	34	23	29	29	14	2	1	0	1	1	1	1	2	433
Patents By Year of Application:	328	31	29	24	13	2	2	0	2	0	0	2	0	0	0	433

JANSSEN PHARMACEUTICA N.V.

Patents By Year of Grant:	121	13	20	20	24	14	20	10	14	30	42	25	21	29	28	431
Patents By Year of Application:	150	15	25	17	18	12	14	18	57	21	29	32	15	8	0	431

GLAXO GROUP LIMITED

Patents By Year of Grant:	116	11	39	30	45	21	28	20	13	11	26	14	20	14	21	429
Patents By Year of Application:	169	28	40	26	22	24	13	15	35	16	18	9	8	6	0	429

SANOFI, S.A.

Patents By Year of Grant:	94	18	21	30	29	25	22	7	22	27	47	42	32	10	2	428
Patents By Year of Application:	144	19	30	27	20	9	14	31	57	26	32	17	2	0	0	428

CALIFORNIA INSTITUTE OF TECHNOLOGY

Patents By Year of Grant:	105	6	16	14	13	15	9	13	8	12	24	57	38	43	54	427
Patents By Year of Application:	129	17	9	10	13	11	17	24	42	41	37	40	30	7	0	427

CHIRON CORPORATION

Patents By Year of Grant:	6	6	5	2	5	16	14	9	12	20	70	80	63	63	54	425
Patents By Year of Application:	29	5	9	15	12	6	23	52	178	21	33	20	17	5	0	425

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**CHEMICAL CLASSES (12-31-2001)**

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----- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

<b>Pre</b>	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	<b>TOTAL</b>
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STANFORD UNIVERSITY, LELAND JUNIOR, THE BOARD OF TRUSTEES OF

**Patents By Year of Grant:** 67 10 11 13 20 16 14 25 22 25 32 39 41 48 42 425  
**Patents By Year of Application:** 96 15 15 16 17 22 32 44 44 21 38 35 26 4 0 425

DYNAMIT NOBEL AKTIENGESELLSCHAFT

**Patents By Year of Grant:** 382 13 8 4 3 1 3 3 2 1 1 1 2 0 0 1 424  
**Patents By Year of Application:** 405 3 4 1 2 2 2 1 0 1 0 1 0 0 0 1 424

**GENERAL HOSPITAL CORPORATION**

**Patents By Year of Grant:** 39 6 9 12 5 13 16 18 10 30 38 54 67 47 60 424  
**Patents By Year of Application:** 65 10 6 9 13 29 35 44 90 24 49 23 23 4 0 424

ISIS PHARMACEUTICALS, INC.

**Patents By Year of Grant:** 0 0 0 0 0 2 5 2 8 29 42 39 77 114 106 424  
**Patents By Year of Application:** 0 0 0 4 5 14 21 44 42 38 37 92 96 31 0 424

COMBUSTION ENGINEERING INC.

**Patents By Year of Grant:** 238 14 18 9 9 13 37 37 15 7 10 7 5 3 1 423  
**Patents By Year of Application:** 265 14 9 12 13 48 24 16 6 4 7 4 0 1 0 423

KANSAT PAINT CO., LTD.

**Patents By Year of Grant:** 80 16 11 29 31 28 21 34 27 16 22 29 22 29 27 422  
**Patents By Year of Application:** 104 30 26 28 28 22 21 19 22 25 22 23 15 7 0 422

MONTEDISON S.P.A.

**Patents By Year of Grant:** 346 23 20 15 12 4 0 0 1 1 0 0 0 0 0 0 422

**Patents By Year of Application:** 386 17 12 4 3 0 0 0 1 0 0 0 0 0 0 0 0 422

NATIONAL SEMICONDUCTOR CORPORATION

Patents By Year of Grant:	65	8	7	10	16	20	26	31	35	28	26	30	39	37	42	420
Patents By Year of Application:	81	7	11	23	17	15	22	28	31	27	26	30	39	4	9	420

MURATA MANUFACTURING CO., LTD.

**Patents By Year of Grant:** 57 12 13 9 21 11 9 26 27 28 24 43 41 45 53 419

ADIDAS ET COMPAGNIE

Patents By Year of Grant: 25 8 12 14 16 37 41 37 45 33 46 28 22 27 24 415

PERMA-VIT CORPORATION

**Patents By Year of Grant:** 312 43 37 23 0 0 0 0 0 0 0 0 0 0 0 0 415



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CHEMICAL CLASSES (12-31-2001)

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---- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre															
	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL

**ENGELHARD CORPORATION**

Patents By Year of Grant:	96	22	14	16	20	21	20	17	15	15	13	21	35	39	30	394
Patents By Year of Application:	131	14	15	21	23	19	14	20	20	29	34	27	23	4	0	394

**ELF ATOCHEM S.A.**

Patents By Year of Grant:	0	0	0	0	0	3	23	23	36	37	46	61	68	63	32	392
Patents By Year of Application:	0	0	0	2	7	30	40	39	61	57	77	57	18	4	0	392

**ICI AMERICAS INC.**

Patents By Year of Grant:	165	17	47	61	51	18	10	10	2	3	1	1	1	0	0	387
Patents By Year of Application:	225	64	39	34	7	8	3	4	1	2	0	0	0	0	0	387

**GULF RESEARCH AND DEVELOPMENT COMPANY**

Patents By Year of Grant:	385	0	0	0	0	0	0	0	0	0	0	0	0	0	0	385
Patents By Year of Application:	385	0	0	0	0	0	0	0	0	0	0	0	0	0	0	385

**UNIVERSITY OF PENNSYLVANIA**

Patents By Year of Grant:	17	0	3	8	10	19	20	25	20	36	49	60	47	27	44	385
Patents By Year of Application:	23	12	10	12	21	26	31	69	46	38	48	20	23	6	0	385

**LG SEMICON CO., LTD.**

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	17	55	87	105	95	24	383
Patents By Year of Application:	0	0	0	0	0	0	2	5	67	86	119	80	22	2	0	383

**THE BRITISH PETROLEUM COMPANY P.L.C.**

Patents By Year of Grant:	224	29	28	21	21	24	17	8	5	2	1	2	1	0	0	383
Patents By Year of Application:	278	25	16	22	21	10	4	3	1	1	1	1	0	0	0	383

**OWENS-ILLINOIS INC.**

Patents By Year of Grant:	376	1	0	0	0	0	0	0	1	0	0	0	1	0	0	379
Patents By Year of Application:	377	0	0	0	0	1	0	0	0	0	1	0	0	0	0	379

**DAINIPPON INK + CHEMICALS, INC.**

Patents By Year of Grant:	116	13	22	37	23	16	16	22	11	11	11	16	20	24	19	377
Patents By Year of Application:	145	40	23	17	20	20	6	14	14	19	22	13	18	6	0	377

**NABISCO, INC.**

Patents By Year of Grant:	136	34	37	31	40	24	14	10	19	16	9	0	3	2	1	376
Patents By Year of Application:	199	28	49	20	19	11	18	14	12	0	2	1	3	0	0	376

**PETROLITE CORPORATION**

Patents By Year of Grant:	294	8	9	10	14	14	3	5	9	6	3	1	0	0	0	376
Patents By Year of Application:	307	13	14	11	7	1	11	4	5	3	0	0	0	0	0	376

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CHEMICAL CLASSES (12-31-2001)

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## ---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre 1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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## ISP INVESTMENTS INC.

Patents By Year of Grant:	0	0	0	0	13	66	70	50	25	14	32	24	23	23	33	373
Patents By Year of Application:	0	2	9	35	56	68	47	26	24	22	17	37	22	8	0	373

## INTEL CORPORATION

Patents By Year of Grant:	40	11	10	7	5	17	20	14	14	15	19	24	53	60	59	368
Patents By Year of Application:	55	8	7	13	16	23	23	12	27	48	54	36	38	8	0	368

## L'AIR LIQUIDE, SOCIETE ANONYME POUR L'ETUDE ET L'EXPLOITATION DES PROCEDES GEORGES CLAUDE

Patents By Year of Grant:	59	9	11	9	15	22	22	13	23	21	13	23	45	31	52	368
Patents By Year of Application:	72	14	11	22	21	19	19	22	18	27	37	37	40	9	0	368

## IDEMITSU PETROCHEMICAL COMPANY LTD.

Patents By Year of Grant:	24	10	18	23	31	28	35	32	10	19	14	26	23	31	41	365
Patents By Year of Application:	39	35	30	37	23	24	23	19	18	24	29	24	29	11	0	365

## MITSUBISHI JUKOGYO KABUSHIKI KAISHA

Patents By Year of Grant:	134	17	16	16	11	18	18	18	18	24	27	23	19	5	1	365
Patents By Year of Application:	162	15	24	8	20	20	15	19	32	37	9	3	1	0	0	365

## UNIVERSITY OF MINNESOTA, THE REGENTS OF

Patents By Year of Grant:	57	11	20	18	14	16	16	18	18	23	26	36	32	30	29	364
Patents By Year of Application:	90	15	16	15	19	19	27	21	43	39	24	22	10	3	1	364

## CHEMISCHE WERKE HULS, AG

Patents By Year of Grant:	352	4	1	0	1	0	1	0	0	0	0	0	0	0	0	359
Patents By Year of Application:	357	1	0	1	0	0	0	0	0	0	0	0	0	0	0	359

## TOSOH CORPORATION

Patents By Year of Grant:	0	7	18	31	32	38	43	25	26	19	18	24	30	25	23	359
Patents By Year of Application:	17	31	31	41	39	29	26	26	19	31	34	21	10	4	0	359

## NISSAN MOTOR COMPANY, LIMITED

Patents By Year of Grant:	169	16	9	13	10	18	18	5	15	8	14	14	14	19	14	356
Patents By Year of Application:	193	11	10	16	19	8	14	10	15	18	18	14	6	4	0	356

## FUJI ELECTRIC CO., LTD.

Patents By Year of Grant:	40	7	17	26	17	28	18	18	24	31	25	29	35	24	15	354
Patents By Year of Application:	58	18	34	16	20	18	29	27	33	31	21	30	14	5	0	354

## BATTELLE MEMORIAL INSTITUTE

Patents By Year of Grant:	113	11	20	10	16	22	17	6	15	12	14	22	28	23	23	352
Patents By Year of Application:	141	20	15	16	11	12	12	17	17	23	21	29	18	0	0	352

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---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

Pre

	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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NIPPON SHOKUBAI CO., LTD.

Patents By Year of Grant:	0	0	0	0	1	7	21	24	23	23	29	40	49	68	67	352
Patents By Year of Application:	0	0	1	3	22	25	23	24	39	36	72	48	46	13	0	352

MINOLTA CAMERA CO., LTD.

Patents By Year of Grant:	66	10	32	37	16	15	15	13	11	10	11	37	32	26	20	351
Patents By Year of Application:	99	33	29	12	18	12	10	12	19	21	32	23	22	9	0	351

RAYCHEM CORPORATION

Patents By Year of Grant:	163	21	37	19	22	16	16	7	12	7	6	12	9	1	0	348
Patents By Year of Application:	212	29	19	18	12	10	7	8	9	14	9	1	0	0	0	348

AKZONA INCORPORATED

Patents By Year of Grant:	342	2	2	1	0	0	0	0	0	0	0	0	0	0	0	347
Patents By Year of Application:	347	0	0	0	0	0	0	0	0	0	0	0	0	0	0	347

HARVARD COLLEGE, PRESIDENT AND FELLOWS

Patents By Year of Grant:	41	16	13	22	9	15	14	14	13	29	25	42	35	26	30	344
Patents By Year of Application:	77	23	7	9	14	19	26	34	55	24	25	16	15	0	0	344

UNIVERSITY OF FLORIDA BOARD OF REGENTS

Patents By Year of Grant:	37	12	26	21	24	31	19	14	18	13	22	20	21	35	29	342
Patents By Year of Application:	80	29	23	21	16	16	17	21	28	19	30	25	15	2	0	342

IOWA STATE UNIVERSITY RESEARCH FOUNDATION INC.

Patents By Year of Grant:	64	5	15	15	22	15	16	23	18	22	22	35	28	22	19	341
Patents By Year of Application:	81	14	22	19	16	15	22	26	31	34	30	20	11	0	0	341

NGK SPARK PLUG CO., LTD.

Patents By Year of Grant:	97	16	20	13	20	18	15	25	10	8	14	9	28	23	25	341
Patents By Year of Application:	133	13	24	12	15	20	11	18	17	8	28	22	18	2	0	341

SEIKO EPSON CORPORATION

Patents By Year of Grant:	12	5	10	8	12	15	29	25	21	22	26	25	34	49	48	341
Patents By Year of Application:	26	12	8	14	33	25	28	21	30	36	29	44	28	7	0	341

ROBERT BOSCH GMBH

Patents By Year of Grant:	116	6	7	2	8	5	10	17	18	19	26	21	25	18	42	340
Patents By Year of Application:	128	1	6	6	11	14	18	23	23	29	25	23	28	5	0	340

FARMITALIA CARLO ERBA, S.P.A.

Patents By Year of Grant:	151	16	29	13	13	16	22	27	26	19	6	1	0	0	0	339
Patents By Year of Application:	192	15	13	20	15	28	27	21	8	0	0	0	0	0	0	339

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CHEMICAL CLASSES (12-31-2001)

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---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

Pre

	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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INSTITUT PASTEUR

Patents By Year of Grant:	41	4	8	6	14	8	12	13	6	14	30	42	51	43	47	339
Patents By Year of Application:	67	7	5	9	19	13	19	38	81	14	25	34	6	2	0	339

PALL CORPORATION

Patents By Year of Grant:	73	9	20	17	4	18	22	28	36	27	28	17	13	17	10	339
Patents By Year of Application:	102	15	11	10	18	35	32	30	33	19	15	10	5	4	0	339

TOKYO ELECTRON LIMITED

Patents By Year of Grant:	0	0	1	4	1	7	21	26	20	20	22	30	56	54	76	338
Patents By Year of Application:	1	1	2	4	23	20	31	25	26	29	60	54	46	13	3	338

THE SCRIPPS RESEARCH INSTITUTE

Patents By Year of Grant:	0	0	0	0	0	9	28	24	36	27	26	56	41	36	54	337
Patents By Year of Application:	2	5	9	12	18	39	28	58	45	31	24	39	18	8	1	337

LSI LOGIC CORPORATION

Patents By Year of Grant:	2	2	1	0	0	1	7	16	19	32	41	46	55	69	43	334
Patents By Year of Application:	5	0	0	2	7	12	17	35	51	49	62	60	31	3	0	334

MITSUBISHI PAPER MILLS, LTD.

Patents By Year of Grant:	126	16	19	16	20	21	22	18	12	9	12	12	10	10	9	332
Patents By Year of Application:	156	18	23	19	24	14	13	8	14	10	19	2	10	2	0	332

MITSUI CHEMICALS, INCORPORATED

Patents By Year of Grant:	0	0	1	0	0	0	0	0	0	0	0	40	97	93	101	332
Patents By Year of Application:	1	0	0	0	0	1	6	7	16	41	103	87	50	19	1	332

TH. GOLDSCHMIDT AG

Patents By Year of Grant:	116	6	17	14	18	22	15	13	15	16	12	12	17	10	25	328
Patents By Year of Application:	133	17	18	11	23	14	12	18	16	18	13	13	18	4	0	328

FIRESTONE TIRE & RUBBER CO.

Patents By Year of Grant:	288	21	17	0	0	0	0	0	0	0	0	0	0	0	0	326
Patents By Year of Application:	322	4	0	0	0	0	0	0	0	0	0	0	0	0	0	326

NIPPONDENSO CO., LTD.

Patents By Year of Grant:	70	14	13	11	9	7	14	13	29	35	34	35	28	7	6	325
Patents By Year of Application:	97	10	8	8	15	16	26	30	44	51	13	6	1	0	0	325

AUSIMONT S.P.A.

Patents By Year of Grant:	6	22	33	16	11	12	26	21	23	25	29	19	27	22	32	324
Patents By Year of Application:	55	21	8	12	19	24	22	22	33	29	32	23	18	6	0	324

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#### ----- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

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CHEMICAL CLASSES (12-31-2001)

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## ---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre 1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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## SMITHKLINE BEECHAM PLC

Patents By Year of Grant:	0	0	0	0	0	1	0	0	5	17	33	47	66	71	67	307
Patents By Year of Application:	0	0	0	1	1	0	5	19	58	41	62	57	54	9	0	307

## CENTRAL GLASS COMPANY, LIMITED

Patents By Year of Grant:	95	5	23	20	27	13	10	15	11	9	13	16	11	13	25	306
Patents By Year of Application:	118	18	23	17	10	17	14	9	16	23	11	8	13	8	1	306

## NIPPON KAYAKU KABUSHIKI KAISHA

Patents By Year of Grant:	117	13	15	23	22	11	16	12	13	10	9	11	8	12	14	306
Patents By Year of Application:	152	9	22	19	17	9	11	10	11	11	11	9	12	3	0	306

## FRAMATOME ET CIE

Patents By Year of Grant:	75	26	18	15	27	33	29	14	18	10	9	20	5	2	2	303
Patents By Year of Application:	121	15	37	20	25	16	16	12	10	16	10	4	1	0	0	303

## MILLIKEN RESEARCH CORPORATION

Patents By Year of Grant:	134	7	14	12	18	15	18	15	12	18	10	18	11	0	0	302
Patents By Year of Application:	146	22	12	19	16	17	9	16	16	11	13	5	0	0	0	302

## RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK

Patents By Year of Grant:	2	1	17	12	12	20	15	26	22	23	27	29	38	29	29	302
Patents By Year of Application:	24	14	13	22	21	19	25	29	33	26	30	27	15	4	0	302

## SHIN-ETSU HANDOTAI CO., LTD.

Patents By Year of Grant:	2	1	6	9	12	15	20	16	19	15	24	37	55	33	37	301
Patents By Year of Application:	7	10	4	18	19	21	14	19	29	44	43	34	33	5	1	301

## LONZA LTD.

Patents By Year of Grant:	82	12	19	19	16	33	37	30	11	10	10	5	7	8	1	300
Patents By Year of Application:	103	20	17	21	35	32	26	16	8	4	8	3	7	0	0	300

## NATIONAL SCIENCE COUNCIL

Patents By Year of Grant:	0	0	3	7	5	4	15	14	25	33	37	42	39	27	47	298
Patents By Year of Application:	1	4	5	7	9	15	23	34	48	36	48	29	30	9	0	298

## RICHTER GEDEON VEGYESZETI GYAR RT

Patents By Year of Grant:	198	17	16	6	9	20	9	6	5	7	0	1	0	4	0	298
Patents By Year of Application:	237	4	4	22	11	6	0	6	3	1	0	2	2	0	0	298

## OTSUKA PHARMACEUTICAL CO., LTD.

Patents By Year of Grant:	84	11	15	9	19	10	15	11	18	21	28	21	12	14	9	297
Patents By Year of Application:	116	11	17	13	13	10	17	24	33	10	15	10	3	4	1	297

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CHEMICAL CLASSES (12-31-2001)

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---- Organizational Patenting

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Pre

	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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HONEYWELL INC.

Patents By Year of Grant:	163	11	16	14	10	7	11	10	5	7	8	5	12	13	4	296
Patents By Year of Application:	181	21	9	10	11	8	6	12	7	5	11	11	3	1	0	296

NORTON COMPANY

Patents By Year of Grant:	98	10	10	19	24	27	15	15	14	16	9	10	11	10	8	296
Patents By Year of Application:	119	19	23	25	20	14	12	12	11	12	13	8	5	3	0	296

COLUMBIA UNIVERSITY

Patents By Year of Grant:	19	11	11	8	5	12	11	12	10	17	22	41	42	33	41	295
Patents By Year of Application:	49	11	9	7	11	11	14	32	34	51	30	22	14	0	0	295

FIRMENICH SA

Patents By Year of Grant:	161	5	7	7	11	16	8	7	9	12	8	10	8	11	13	293
Patents By Year of Application:	170	7	8	10	14	8	8	12	12	10	9	12	10	3	0	293

GTE LABORATORIES, INC.

Patents By Year of Grant:	178	22	21	20	22	13	9	6	0	0	0	0	0	1	0	292
Patents By Year of Application:	218	19	21	19	7	6	1	0	0	0	0	0	1	0	0	292

ROCKEFELLER UNIVERSITY

Patents By Year of Grant:	28	11	6	7	11	22	21	13	9	8	20	35	34	42	25	292
Patents By Year of Application:	49	5	10	19	22	18	8	30	47	21	25	25	10	3	0	292

YEDA RESEARCH AND DEVELOPMENT CO., LTD.

Patents By Year of Grant:	105	5	10	9	9	9	15	7	10	15	11	22	29	18	17	291
Patents By Year of Application:	134	4	14	10	8	10	15	12	28	14	19	15	3	5	0	291

MORTON INTERNATIONAL, INC.

Patents By Year of Grant:	0	0	0	6	15	20	21	21	24	29	32	35	39	29	19	290
Patents By Year of Application:	0	2	15	18	21	17	23	26	29	41	42	35	21	0	0	290

ALCAN INTERNATIONAL LIMITED

Patents By Year of Grant:	56	9	21	24	30	41	17	19	17	11	4	6	9	12	11	287
Patents By Year of Application:	81	25	29	31	24	23	19	12	9	6	9	7	9	3	0	287

CASSELLA AKTIENGESELLSCHAFT

Patents By Year of Grant:	157	11	15	14	14	14	13	14	16	12	5	0	0	0	1	286
Patents By Year of Application:	178	12	11	19	12	15	17	12	7	3	0	0	0	0	0	286

CHARTERED SEMICONDUCTOR MANUFACTURING PTE LTD

Patents By Year of Grant:	0	0	0	0	0	2	4	4	4	6	29	25	30	71	111	286
Patents By Year of Application:	0	0	0	0	3	5	3	6	11	43	33	43	94	39	6	286

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CHEMICAL CLASSES (12-31-2001)

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---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

Pre

	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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SALK INSTITUTE FOR BIOLOGICAL STUDIES

Patents By Year of Grant:	71	9	5	5	15	11	13	11	9	18	30	26	21	19	23	286
Patents By Year of Application:	94	9	8	11	14	10	25	26	49	10	10	12	8	0	0	286

NITTO DENKO CORPORATION

Patents By Year of Grant:	0	0	3	10	7	13	21	23	14	15	27	27	31	44	50	285
Patents By Year of Application:	5	6	10	13	11	23	16	19	30	34	40	35	36	7	0	285

NOVARTIS AG (FORMERLY SANDOZ LTD.)

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	6	18	70	87	104	285	
Patents By Year of Application:	0	0	0	1	0	1	1	6	24	11	65	71	85	19	1	285

SAINTE-GOBAIN VITRAGE

Patents By Year of Grant:	64	20	30	22	12	9	3	4	2	11	17	24	26	21	20	285
Patents By Year of Application:	111	20	16	11	4	3	2	14	25	20	29	17	11	2	0	285

NKK CORPORATION

Patents By Year of Grant:	0	0	4	33	39	35	30	20	28	24	19	15	15	15	7	284
Patents By Year of Application:	0	15	44	42	27	25	29	33	21	13	17	13	3	2	0	284

NATIONAL STARCH AND CHEMICAL CORPORATION

Patents By Year of Grant:	198	34	38	12	0	0	0	0	0	0	0	0	0	0	0	282
Patents By Year of Application:	254	22	6	0	0	0	0	0	0	0	0	0	0	0	0	282

SRI INTERNATIONAL

Patents By Year of Grant:	68	11	17	18	13	22	20	13	12	7	12	17	16	18	18	282
Patents By Year of Application:	106	9	20	22	11	15	12	11	18	10	19	10	18	1	0	282

BABCOCK & WILCOX COMPANY

Patents By Year of Grant:	103	10	10	8	16	16	19	11	20	28	22	7	1	4	6	281
Patents By Year of Application:	119	9	13	18	11	21	14	31	27	8	5	2	2	1	0	281

TERUMO KABUSHIKI KAISHA (TERUMO CORPORATION)

Patents By Year of Grant:	60	19	17	24	18	42	35	14	5	16	12	3	4	6	6	281
Patents By Year of Application:	94	17	40	31	29	18	10	10	12	4	8	2	6	0	0	281

NATIONAL DISTILLERS AND CHEMICAL CORPORATION

Patents By Year of Grant:	246	11	14	3	3	1	1	0	0	0	0	0	0	0	0	279
Patents By Year of Application:	269	4	4	2	0	0	0	0	0	0	0	0	0	0	0	279

SUNTORY LTD.

Patents By Year of Grant:	26	18	19	10	18	21	15	20	16	7	15	19	27	21	25	277
Patents By Year of Application:	65	17	17	13	23	18	17	14	18	21	25	8	17	4	0	277

## ---- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre 1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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## WASHINGTON UNIVERSITY

Patents By Year of Grant:	13	5	8	4	15	14	12	14	14	14	18	34	45	33	34	277
Patents By Year of Application:	29	4	15	11	12	21	25	23	32	38	32	20	8	5	2	277

## HITACHI METALS LTD.

Patents By Year of Grant:	55	10	12	18	20	29	15	19	13	17	7	17	19	11	11	273
Patents By Year of Application:	78	21	13	21	20	23	12	21	9	18	16	12	7	2	0	273

## SANDOZ PHARMACEUTICALS CORP.

Patents By Year of Grant:	233	5	15	9	4	2	0	3	1	1	0	0	0	0	0	273
Patents By Year of Application:	248	11	6	2	1	1	3	1	0	0	0	0	0	0	0	273

## TANABE SEIYAKU CO. LTD.

Patents By Year of Grant:	93	12	15	13	14	7	23	9	14	15	14	26	9	4	5	273
Patents By Year of Application:	113	16	13	15	11	16	21	7	23	21	9	5	2	1	0	273

## CHESEBROUGH-POND'S USA CO., DIVISION OF CONOPCO, INC.

Patents By Year of Grant:	5	4	6	8	16	31	32	16	20	30	24	35	18	19	7	271
Patents By Year of Application:	19	4	18	17	34	22	21	25	27	31	24	20	6	3	0	271

## GENCORP INC.

Patents By Year of Grant:	147	4	9	8	6	9	11	16	13	14	16	11	4	3	0	271
Patents By Year of Application:	157	8	7	7	17	9	15	21	11	11	6	2	0	0	0	271

## TEXACO CHEMICAL COMPANY

Patents By Year of Grant:	0	2	11	26	47	80	65	38	2	0	0	0	0	0	0	271
Patents By Year of Application:	4	25	38	70	57	47	30	0	0	0	0	0	0	0	0	271

## UNILEVER PATENT HOLDINGS B.V.

Patents By Year of Grant:	1	4	12	26	29	22	26	36	23	17	12	19	13	17	14	271
Patents By Year of Application:	21	21	27	25	22	34	32	27	19	11	11	10	6	5	0	271

## CALGON CORPORATION

Patents By Year of Grant:	116	12	10	8	12	13	20	15	12	10	11	9	5	11	6	270
Patents By Year of Application:	136	10	6	17	14	27	8	7	14	12	6	6	4	3	0	270

## CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIC (CNRS)

Patents By Year of Grant:	51	17	20	18	16	16	21	9	9	11	12	12	21	17	20	270
Patents By Year of Application:	94	16	12	18	20	7	11	15	22	9	14	15	11	6	0	270

## DAI NIPPON PRINTING CO. LTD

Patents By Year of Grant:	17	0	0	0	1	0	7	8	18	24	31	50	32	40	40	268
Patents By Year of Application:	17	0	1	4	8	12	16	21	35	50	40	32	26	6	0	268

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(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre 1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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## SUMITOMO METAL INDUSTRIES CO., LTD.

Patents By Year of Grant:	88	5	11	7	10	11	9	16	14	10	8	15	18	25	21	268
Patents By Year of Application:	102	9	11	9	9	13	13	15	10	15	16	21	19	5	1	268

## TEXACO DEVELOPMENT CORPORATION

Patents By Year of Grant:	265	0	0	0	0	0	0	0	0	2	1	0	0	0	0	268
Patents By Year of Application:	265	0	0	0	0	0	0	1	2	0	0	0	0	0	0	268

## CABOT CORPORATION

Patents By Year of Grant:	79	3	4	4	3	9	15	6	8	8	7	16	37	39	29	267
Patents By Year of Application:	83	6	5	9	10	8	9	10	17	23	48	19	19	1	0	267

## ALBEMARLE CORPORATION

Patents By Year of Grant:	0	0	0	0	0	0	0	17	27	25	35	43	43	39	36	265
Patents By Year of Application:	0	0	1	0	4	8	27	14	39	34	48	47	35	8	0	265

## INTERNATIONAL PAPER CO.

Patents By Year of Grant:	74	5	12	11	7	6	17	12	16	20	15	24	19	13	14	265
Patents By Year of Application:	87	15	6	6	15	17	22	20	23	14	25	10	4	1	0	265

## YAMANOUCHI PHARMACEUTICAL CO., LTD.

Patents By Year of Grant:	99	17	15	18	14	13	10	5	17	13	11	11	4	10	8	265
Patents By Year of Application:	124	15	19	15	8	9	12	17	14	7	9	7	4	5	0	265

## ELECTRIC POWER RESEARCH INSTITUTE, INC.

Patents By Year of Grant:	118	7	12	14	14	12	22	9	11	9	8	7	11	5	5	264
Patents By Year of Application:	134	17	13	13	22	11	7	13	6	8	8	7	5	0	0	264

## DIAMOND SHAMROCK CORPORATION

Patents By Year of Grant:	263	0	0	0	0	0	0	0	0	0	0	0	0	0	0	263
Patents By Year of Application:	263	0	0	0	0	0	0	0	0	0	0	0	0	0	0	263

## W. L. GORE &amp; ASSOCIATES, INC.

Patents By Year of Grant:	18	3	9	10	10	14	16	20	23	28	24	33	32	18	3	261
Patents By Year of Application:	30	10	11	9	12	18	21	35	33	52	17	8	3	2	0	261

## PRODUITS CHIMIQUES UGINE KUHLMANN

Patents By Year of Grant:	252	4	1	1	2	0	0	0	0	0	0	0	0	0	0	260
Patents By Year of Application:	258	1	1	0	0	0	0	0	0	0	0	0	0	0	0	260

## MERCK SHARP &amp; DOHME LIMITED

Patents By Year of Grant:	1	0	1	7	5	5	14	15	14	25	49	28	30	40	25	259
Patents By Year of Application:	3	4	6	6	10	12	20	19	50	25	31	37	24	12	0	259



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CHEMICAL CLASSES (12-31-2001)

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---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

Pre

	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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**OLYMPUS OPTICAL CO., LTD.**

Patents By Year of Grant:	140	8	8	10	11	13	14	8	11	6	4	9	3	1	6	252
Patents By Year of Application:	162	5	13	14	5	12	11	7	9	3	5	4	2	0	0	252

**RHONE-POULENC RORER, S.A.**

Patents By Year of Grant:	0	0	0	0	0	2	6	14	20	22	59	51	36	22	18	250
Patents By Year of Application:	0	0	1	1	3	14	22	23	68	38	54	16	9	1	0	250

**GENETICS INSTITUTE, INC.**

Patents By Year of Grant:	5	6	12	8	13	9	12	13	15	14	27	39	33	19	24	249
Patents By Year of Application:	31	9	12	11	14	12	17	20	31	36	34	15	6	1	0	249

**MITA INDUSTRIAL COMPANY LTD.**

Patents By Year of Grant:	91	1	6	9	13	18	33	20	6	11	10	15	8	7	1	249
Patents By Year of Application:	96	7	15	28	21	20	10	8	17	8	7	8	3	1	0	249

**S. C. JOHNSON + SON, INC.**

Patents By Year of Grant:	72	11	26	15	8	13	6	6	5	8	12	18	29	11	9	249
Patents By Year of Application:	99	15	14	14	7	7	5	6	16	22	28	10	6	0	0	249

**AKTIEBOLAGET ASTRA**

Patents By Year of Grant:	1	0	0	0	1	0	3	4	14	14	41	53	48	46	23	248
Patents By Year of Application:	1	0	1	3	7	6	14	32	78	35	32	26	12	1	0	248

**MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSCHAFTEN E.V.**

Patents By Year of Grant:	89	10	7	8	9	4	6	8	10	8	11	18	30	17	13	248
Patents By Year of Application:	109	13	5	2	9	5	13	11	29	24	14	10	2	2	0	248

**HOOKER CHEMICALS & PLASTICS CORP.**

Patents By Year of Grant:	245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	245
Patents By Year of Application:	245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	245

**SHISEIDO CO., LTD.**

Patents By Year of Grant:	25	3	8	2	8	17	15	17	11	9	20	33	26	27	24	245
Patents By Year of Application:	36	8	10	17	13	13	18	12	16	27	22	34	15	4	0	245

**AVERY DENNISON CORPORATION**

Patents By Year of Grant:	0	0	0	0	1	15	20	13	7	27	35	34	32	35	25	244
Patents By Year of Application:	1	0	7	13	13	19	12	24	51	31	38	28	5	2	0	244

**POLYPLASTICS CO., LTD.**

Patents By Year of Grant:	21	12	20	25	23	31	38	12	11	12	4	13	11	5	6	244
Patents By Year of Application:	46	26	26	28	33	21	8	14	8	12	13	3	3	3	0	244

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CHEMICAL CLASSES (12-31-2001)

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## ---- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre 1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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## TRW INC.

Patents By Year of Grant:	115	7	5	2	3	9	7	13	5	7	5	12	12	24	18	244
Patents By Year of Application:	125	5	3	4	10	10	4	10	8	13	15	18	15	4	0	244

## DEUTSCHE GOLD- UND SILBER-SCHEIDEANSTALT VORMALS ROESSLER

Patents By Year of Grant:	242	0	0	0	0	0	0	0	0	0	0	0	0	0	0	242
Patents By Year of Application:	242	0	0	0	0	0	0	0	0	0	0	0	0	0	0	242

## KAO SOAP CO., LTD.

Patents By Year of Grant:	236	3	0	2	0	1	0	0	0	0	0	0	0	0	0	242
Patents By Year of Application:	241	0	0	1	0	0	0	0	0	0	0	0	0	0	0	242

## HAYASHIBARA BIOCHEMICAL LABORATORIES INCORPORATED

Patents By Year of Grant:	40	9	13	5	7	7	5	6	9	21	18	28	39	17	17	241
Patents By Year of Application:	65	6	2	7	5	5	13	19	35	14	44	14	10	2	0	241

## THE CLOROX COMPANY

Patents By Year of Grant:	29	14	18	18	13	18	14	12	12	11	8	24	18	17	14	240
Patents By Year of Application:	60	18	20	12	14	13	9	11	20	22	14	13	12	2	0	240

## TOYO BOSEKI KABUSHIKI KAISHA

Patents By Year of Grant:	1	0	0	13	11	13	14	14	26	20	20	27	27	22	32	240
Patents By Year of Application:	6	10	12	8	17	18	19	25	27	27	29	16	19	7	0	240

## MEIJI SEIKA KAISHA LTD.

Patents By Year of Grant:	93	8	9	11	13	7	10	10	11	3	15	12	10	10	17	239
Patents By Year of Application:	109	10	11	10	13	6	10	9	12	10	9	13	13	4	0	239

## NIPPON OIL AND FATS CO., LTD.

Patents By Year of Grant:	87	8	23	24	22	26	25	10	6	5	1	0	1	0	0	238
Patents By Year of Application:	113	26	25	25	23	12	6	3	4	0	1	0	0	0	0	238

## KABUSHIKI KAISHA TOYOTA CHUO KENKYUSHO

Patents By Year of Grant:	70	11	11	11	6	11	9	3	11	12	15	13	18	18	18	237
Patents By Year of Application:	89	12	8	8	10	5	11	13	14	16	15	20	13	3	0	237

## NIPPON TELEGRAPH &amp; TELEPHONE CORP.

Patents By Year of Grant:	109	11	14	9	9	4	14	13	8	9	10	8	3	12	4	237
Patents By Year of Application:	130	11	10	6	9	9	17	8	10	7	7	8	4	1	0	237

## HALLIBURTON CO.

Patents By Year of Grant:	148	8	5	3	9	11	6	14	12	8	7	4	1	0	0	236
Patents By Year of Application:	159	5	6	5	13	10	13	10	8	4	3	0	0	0	0	236

## ---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre															
	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL

## ENIRICERCHE S.P.A.

Patents By Year of Grant:	4	11	20	16	27	28	30	22	16	16	16	12	13	3	1	235
Patents By Year of Application:	33	22	20	30	23	21	25	18	19	12	8	4	0	0	0	235

## MEAD CORPORATION

Patents By Year of Grant:	94	13	24	26	13	16	13	9	5	2	5	3	4	3	4	234
Patents By Year of Application:	125	20	22	14	19	8	2	6	7	1	3	3	4	0	0	234

## CYTEC TECHNOLOGY CORP.

Patents By Year of Grant:	0	0	0	0	0	0	0	21	21	25	35	48	24	35	24	233
Patents By Year of Application:	0	0	0	4	2	9	29	27	53	48	23	22	14	2	0	233

## GLAXO WELLCOME INC.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	1	23	29	39	47	43	51	233
Patents By Year of Application:	1	0	1	0	0	0	11	24	45	28	53	33	22	15	0	233

## KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY

Patents By Year of Grant:	2	0	0	1	8	15	17	7	29	24	19	34	33	23	21	233
Patents By Year of Application:	2	0	3	9	20	12	12	35	27	38	29	21	14	10	1	233

## LANXIDE TECHNOLOGY COMPANY, LP

Patents By Year of Grant:	1	1	31	18	27	31	31	24	20	18	17	9	2	2	1	233
Patents By Year of Application:	30	22	25	26	22	33	24	23	22	2	3	1	0	0	0	233

## PPG INDUSTRIES OHIO INC.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	59	83	91	233	
Patents By Year of Application:	0	0	0	1	2	2	3	5	6	10	46	72	73	13	0	233

## HOYA CORPORATION

Patents By Year of Grant:	45	8	12	12	13	19	11	6	7	0	9	13	29	26	22	232
Patents By Year of Application:	55	18	13	18	12	9	6	2	11	14	34	18	19	3	0	232

## LUDWIG INSTITUTE FOR CANCER RESEARCH

Patents By Year of Grant:	0	0	0	0	1	4	6	6	3	20	22	45	35	39	50	231
Patents By Year of Application:	1	1	1	5	6	9	10	30	42	35	29	43	15	4	0	231

## OKI ELECTRIC INDUSTRY CO., LTD.

Patents By Year of Grant:	27	9	21	10	10	19	16	6	4	4	5	2	26	26	46	231
Patents By Year of Application:	43	19	9	14	25	8	4	4	4	9	15	37	22	18	0	231

## SOLVAY &amp; CIE (SOCIETE ANONYME)

Patents By Year of Grant:	132	9	18	12	18	22	10	7	1	0	2	0	0	0	0	231
Patents By Year of Application:	161	11	16	21	12	7	0	1	2	0	0	0	0	0	0	231

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CHEMICAL CLASSES (12-31-2001)

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## ---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

Pre

1988 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 TOTAL

## SWISS ALUMINUM LTD.

Patents By Year of Grant:	205	4	11	7	3	1	0	0	0	0	0	0	0	0	0	231
Patents By Year of Application:	216	9	4	1	1	0	0	0	0	0	0	0	0	0	0	231

## SYNTHELABO S.A.

Patents By Year of Grant:	89	5	13	15	12	7	12	8	18	15	11	7	8	9	1	230
Patents By Year of Application:	105	12	16	7	7	11	13	17	16	6	5	11	4	0	0	230

## WILLIAM WRIGLEY JR. COMPANY

Patents By Year of Grant:	13	4	9	15	10	41	19	21	26	22	8	5	13	14	10	230
Patents By Year of Application:	21	13	14	22	28	27	22	25	18	9	11	7	9	3	1	230

## TOA NENRYO KOGYO KABUSHIKI KAISHA

Patents By Year of Grant:	136	16	28	20	14	12	2	0	1	0	0	0	0	0	0	229
Patents By Year of Application:	174	29	12	6	6	1	1	0	0	0	0	0	0	0	0	229

## KERNFORSCHUNGSSANLAGE JULICH GMBH

Patents By Year of Grant:	183	16	9	11	5	3	1	0	0	0	0	0	0	0	0	228
Patents By Year of Application:	212	8	6	1	0	1	0	0	0	0	0	0	0	0	0	228

## VLSI TECHNOLOGY, INC.

Patents By Year of Grant:	0	1	1	1	4	4	12	21	31	12	12	29	43	37	20	228
Patents By Year of Application:	1	1	2	6	11	19	30	16	13	28	57	25	17	2	0	228

## DE SOTO, INC.

Patents By Year of Grant:	187	14	15	8	3	0	0	0	0	0	0	0	0	0	0	227
Patents By Year of Application:	209	11	6	1	0	0	0	0	0	0	0	0	0	0	0	227

## TOKYO OHKA KOGYO CO., LTD.

Patents By Year of Grant:	22	9	12	10	6	4	5	8	8	13	13	24	32	27	34	227
Patents By Year of Application:	38	14	6	5	5	4	10	14	11	28	32	27	24	8	1	227

## UNITIKA LTD.

Patents By Year of Grant:	94	7	9	5	10	10	8	13	8	15	11	13	13	8	3	227
Patents By Year of Application:	111	5	7	10	8	13	10	18	12	9	15	5	4	0	0	227

## UNIVERSITY OF NORTH CAROLINA

Patents By Year of Grant:	4	1	0	6	2	9	12	12	16	19	32	24	37	24	29	227
Patents By Year of Application:	6	8	7	7	10	14	10	23	47	21	35	17	18	4	0	227

## NIPPON PETROCHEMICALS COMPANY, LIMITED

Patents By Year of Grant:	55	16	18	11	18	13	21	17	8	7	5	7	7	13	10	226
Patents By Year of Application:	85	24	15	11	20	14	7	8	5	6	16	8	1	5	1	226

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CHEMICAL CLASSES (12-31-2001)

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----- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ----- Ranked List of Organizations with 200 or More Patents -----

Pre

	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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MCDONNELL DOUGLAS CORP.

Patents By Year of Grant:	99	4	3	3	5	6	6	12	6	5	13	17	23	15	7	224
Patents By Year of Application:	108	4	5	10	6	8	2	11	12	19	24	11	4	0	0	224

PRAKAL TECHNOLOGY, INC.

Patents By Year of Grant:	0	0	0	0	0	4	18	16	21	12	21	27	37	31	37	224
Patents By Year of Application:	1	0	0	2	15	13	18	18	25	22	51	29	24	6	0	224

THOMSON-CSF

Patents By Year of Grant:	129	15	4	8	7	7	12	11	9	3	5	2	8	3	1	224
Patents By Year of Application:	146	9	9	7	10	11	9	4	5	6	5	3	0	0	0	224

CHURCH + DWIGHT CO., INC.

Patents By Year of Grant:	10	2	2	4	0	6	25	30	39	28	20	19	23	9	6	223
Patents By Year of Application:	14	4	0	0	18	24	50	27	35	16	19	14	1	1	0	223

LINDE AKTIENGESELLSCHAFT

Patents By Year of Grant:	143	10	10	9	7	7	1	3	8	3	6	6	1	3	6	223
Patents By Year of Application:	166	6	5	6	5	5	5	2	5	8	1	5	3	1	0	223

NIPPON SHOKUBAI KAGAKU KOGYO CO. LTD.

Patents By Year of Grant:	74	19	19	26	21	28	18	9	2	3	2	1	0	1	0	223
Patents By Year of Application:	107	25	25	32	17	5	5	3	2	1	1	0	0	0	0	223

RHONE-POULENC SPECIALITIES CHIMIQUES

Patents By Year of Grant:	141	38	21	10	5	2	2	3	0	0	0	1	0	0	0	223
Patents By Year of Application:	204	6	5	2	3	3	0	0	0	0	0	0	0	0	0	223

SHIPLEY COMPANY INC.

Patents By Year of Grant:	32	5	5	9	12	13	21	13	11	16	15	14	18	22	17	223
Patents By Year of Application:	44	8	6	16	23	8	23	8	16	18	23	20	3	7	0	223

J. M. HUBER CORPORATION

Patents By Year of Grant:	97	3	11	7	16	16	14	11	2	7	4	9	8	11	5	221
Patents By Year of Application:	107	2	19	14	19	10	6	4	4	9	10	10	6	1	0	221

UNITED STATES OF AMERICA, DEPARTMENT OF THE INTERIOR

Patents By Year of Grant:	150	3	5	2	8	8	6	7	8	9	4	1	5	3	2	221
Patents By Year of Application:	157	3	4	10	5	7	7	9	7	2	4	4	2	0	0	221

MITSUBISHI MATERIALS CORPORATION

Patents By Year of Grant:	0	0	0	0	6	17	22	35	27	17	23	23	16	14	17	217
Patents By Year of Application:	0	1	7	10	20	36	26	28	22	21	18	13	9	6	0	217

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CHEMICAL CLASSES (12-31-2001)

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	Pre 1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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## SANDVIK AKTIEBOLAG

Patents By Year of Grant:	10	2	8	4	3	9	4	12	21	22	16	20	32	17	37	217
Patents By Year of Application:	17	6	5	5	6	15	14	22	26	20	25	23	19	14	0	217

## RICHARDSON-VICKS INC.

Patents By Year of Grant:	142	5	5	9	9	3	2	2	3	5	12	15	3	0	0	215
Patents By Year of Application:	152	6	8	6	3	1	6	3	13	5	11	1	0	0	0	215

## BOEHRINGER INGELHEIM, GMBH

Patents By Year of Grant:	172	0	0	3	4	5	9	3	2	3	6	3	2	1	1	214
Patents By Year of Application:	172	2	4	5	7	4	3	4	8	1	2	0	2	0	0	214

## HARRIS CORP.

Patents By Year of Grant:	67	8	11	15	7	10	11	8	12	11	22	15	15	0	2	214
Patents By Year of Application:	84	9	12	11	9	13	10	13	24	13	10	5	1	0	0	214

## HITACHI MAXELL, LTD.

Patents By Year of Grant:	45	11	19	11	22	12	11	8	6	13	11	9	15	16	5	214
Patents By Year of Application:	76	14	17	18	3	8	12	12	16	10	13	11	3	1	0	214

## SLOAN-KETTERING INSTITUTE FOR CANCER RESEARCH

Patents By Year of Grant:	47	8	10	10	8	12	6	8	7	13	22	19	11	15	18	214
Patents By Year of Application:	74	12	7	4	7	8	12	20	36	6	9	8	7	4	0	214

## TORAY SILICONE COMPANY, LTD.

Patents By Year of Grant:	118	25	23	21	21	3	1	0	0	0	0	0	0	0	0	212
Patents By Year of Application:	153	29	28	2	0	0	0	0	0	0	0	0	0	0	0	212

## DONALDSON COMPANY, INC.

Patents By Year of Grant:	70	4	7	4	4	3	5	4	8	5	11	14	26	24	22	211
Patents By Year of Application:	76	8	3	4	2	4	11	6	8	16	26	30	15	0	2	211

## MERCK FROSST CANADA, INC.

Patents By Year of Grant:	20	7	11	12	9	14	20	14	17	17	10	14	12	14	19	210
Patents By Year of Application:	41	11	10	7	17	23	18	14	15	8	15	10	11	10	0	210

## YALE UNIVERSITY

Patents By Year of Grant:	21	5	8	7	2	11	12	8	13	4	15	31	21	28	24	210
Patents By Year of Application:	40	4	10	7	7	12	17	17	25	21	17	17	14	2	0	210

## BASF LACKE &amp; FARBEN AG

Patents By Year of Grant:	0	7	8	10	14	12	20	34	22	21	18	30	8	3	2	209
Patents By Year of Application:	14	7	20	16	16	24	25	31	24	22	7	1	2	0	0	209

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---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre															
	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL

**COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH**

Patents By Year of Grant:	4	2	2	6	2	3	7	5	9	6	18	21	33	35	56	209
Patents By Year of Application:	7	2	5	5	3	9	5	14	14	22	31	34	30	27	1	209

**PERKIN-ELMER CORPORATION**

Patents By Year of Grant:	52	3	8	8	7	6	1	3	3	10	11	24	28	28	17	209
Patents By Year of Application:	62	8	7	7	4	0	5	13	20	19	24	21	15	3	1	209

**UNITED KINGDOM ATOMIC ENERGY AUTHORITY**

Patents By Year of Grant:	151	9	13	7	10	1	7	4	2	5	0	0	0	0	0	209
Patents By Year of Application:	171	8	10	1	8	2	4	1	4	0	0	0	0	0	0	209

**ZYMOGENETICS, INC.**

Patents By Year of Grant:	1	3	5	4	4	6	7	6	13	21	21	30	32	22	34	209
Patents By Year of Application:	15	7	6	2	3	8	14	22	50	9	26	20	18	9	0	209

**DUKE UNIVERSITY INC.**

Patents By Year of Grant:	15	4	5	3	3	3	7	17	15	22	14	20	25	22	33	208
Patents By Year of Application:	26	7	4	2	4	18	18	29	24	22	13	19	18	4	0	208

**KANEBO LTD.**

Patents By Year of Grant:	94	9	10	12	5	13	12	11	7	3	8	4	5	8	7	208
Patents By Year of Application:	108	13	9	13	11	7	12	8	3	7	6	4	6	1	0	208

**ONO PHARMACEUTICAL COMPANY, LIMITED**

Patents By Year of Grant:	69	5	9	8	11	11	10	7	14	11	11	10	9	9	14	208
Patents By Year of Application:	80	10	8	10	12	9	11	18	9	13	5	12	6	5	0	208

**DU PONT MERCK PHARMACEUTICAL COMPANY**

Patents By Year of Grant:	0	0	0	0	18	29	30	29	25	28	25	18	4	0	0	206
Patents By Year of Application:	3	6	13	29	19	38	26	31	20	18	3	0	0	0	0	206

**RHONE-POULENC AGROCHIMIE LIMITED**

Patents By Year of Grant:	70	8	11	7	4	10	6	2	6	9	17	10	23	17	6	206
Patents By Year of Application:	91	7	5	5	6	5	3	16	21	6	19	13	9	0	0	206

**GIST-BROCADES N.V.**

Patents By Year of Grant:	80	3	3	11	11	12	12	15	12	8	11	16	8	2	1	205
Patents By Year of Application:	94	8	15	10	14	12	11	18	15	4	4	0	0	0	0	205

**NIPPON SHEET GLASS CO., LTD.**

Patents By Year of Grant:	43	11	7	9	10	19	8	19	3	7	4	3	19	21	22	205
Patents By Year of Application:	58	12	4	16	12	22	6	6	5	3	19	19	15	6	2	205

---- Technology Assessment and Forecast Report ----

CHEMICAL CLASSES (12-31-2001)

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---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 200 or More Patents ----

Pre

	1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
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SNAM PROGETTI S.P.A.

Patents By Year of Grant:	156	4	3	4	3	4	4	3	3	2	2	5	4	5	3	205
Patents By Year of Application:	162	5	3	1	4	5	3	4	4	4	2	6	1	1	0	205

AGENCE NATIONALE DE VALORISATION DE LA RECHERCHE (ANVAR)

Patents By Year of Grant:	196	4	1	2	1	0	0	0	0	0	0	0	0	0	0	204
Patents By Year of Application:	202	1	0	1	0	0	0	0	0	0	0	0	0	0	0	204

CHUGAI SEIYAKU KABUSHIKI KAISHA

Patents By Year of Grant:	69	6	12	5	9	2	3	2	2	7	8	14	25	18	22	204
Patents By Year of Application:	85	10	6	4	2	0	4	9	13	17	17	21	12	4	0	204

UNIVERSITY OF PITTSBURGH

Patents By Year of Grant:	19	0	6	6	7	7	6	5	9	8	15	23	35	26	32	204
Patents By Year of Application:	24	4	6	11	8	4	14	15	25	27	29	26	10	1	0	204

ENERGY CONVERSION DEVICES, INC.

Patents By Year of Grant:	135	14	10	6	2	6	5	3	2	1	3	1	4	5	6	203
Patents By Year of Application:	156	4	8	7	7	1	1	1	4	4	1	6	3	0	0	203

SOLVAY (SOCIETE ANONYME)

Patents By Year of Grant:	0	0	0	0	0	4	21	27	22	21	22	19	19	21	27	203
Patents By Year of Application:	0	1	1	3	16	20	31	34	24	25	18	18	10	2	0	203

UNION CAMP CORPORATION

Patents By Year of Grant:	68	12	20	18	18	22	9	8	9	1	4	5	4	3	2	203
Patents By Year of Application:	92	17	20	23	15	5	6	7	4	6	3	4	1	0	0	203

NIKON CORPORATION

Patents By Year of Grant:	20	2	2	1	1	1	6	2	9	11	20	18	34	34	41	202
Patents By Year of Application:	24	0	1	3	6	5	4	7	28	23	27	32	34	8	0	202

SUMITOMO RUBBER INDUSTRIES, LTD.

Patents By Year of Grant:	17	2	1	3	10	10	21	19	15	22	11	15	19	16	20	201
Patents By Year of Application:	20	5	8	13	14	23	18	16	22	13	24	19	5	1	0	201

NORTH CAROLINA STATE UNIVERSITY

Patents By Year of Grant:	11	3	8	11	7	13	20	14	14	15	16	14	17	13	24	200
Patents By Year of Application:	22	10	7	10	11	15	25	16	18	21	17	14	9	5	0	200

Other Organizations (47058)

Patents By Year of Grant:	72617	7626	9416	9040	9781	10426	10845	10675	11180	12030	14224	17962	19527	19475	21939	256763
Patents By Year of Application:	88762	9194	10130	10118	10078	11206	12259	14507	19599	16020	18993	17481	14116	4147	153	256763

