

Key Statistical Data

Institution Regular Staff

By the end of 2011, the CAS had 60,600 regular staff. Among them, female staff amounted to 20,000, accounting for 33.2%.

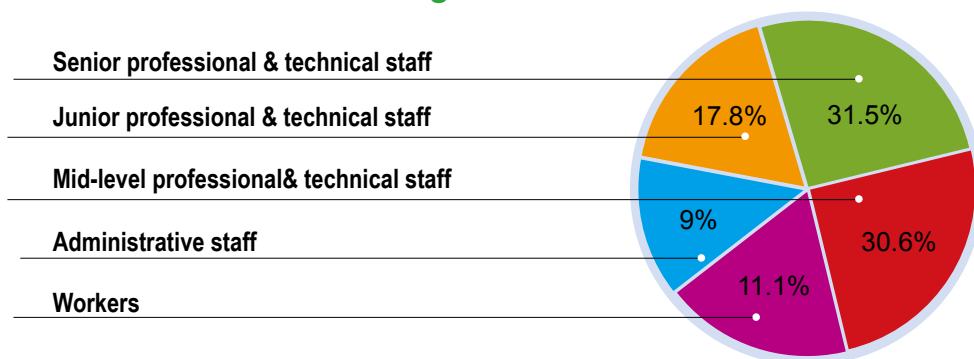
Professional personnel amounted to 48,400, accounting for 79.9% of the total staff, including 19,100 associate professors or equivalent and full professors (full professors amounted to 7,200) and 18,500 middle-level professional personnel, accounting for 39.4% and 38.3% of the professional personnel respectively.

Administrative staff amounted to 5,500, accounting for 9.0% of the total staff. Workers amounted to 6,700, accounting for 11.1% of the total.

Among the regular staff, 32.3% are personnel with Ph.D. degree, 22.4% with Master degree.

Personnel under 30 years old accounted for 27.4% with the highest proportion. Personnel with the age of 31 to 35 ranked at the second, accounting for 19.3%, followed by those with their age between 46 and 50, and 41-45, which accounted for 14.7% and 11.9% respectively.

Classification of institution regular staff



Proportion of regular staff by academic degree and education

		<i>person(ten thousand)</i>	<i>Proportion in Regular staff(%)</i>
Degree	Ph.D.	1.96	32.3
	M.S.	1.36	22.4
	B.S.	0.90	14.9
Education	Postgraduates	3.32	54.8
	University graduates	1.32	21.8
	Vocational high school graduates	0.59	9.7
	Specilized secondary school graduates	0.16	2.6
	Others	0.67	11.1

CAS Members

By the end of 2011, there have been 727 CAS members, including 44 female members, 139 from the Division of Mathematics and Physics, 126 from the Division of Chemistry, 128 from the Division of Life Sciences and Medical Sciences, 119 from the Division of Earth Sciences, 83 from the Division of Information Technological Sciences, 132 from the Division of Technological Sciences, and 64 foreign members.

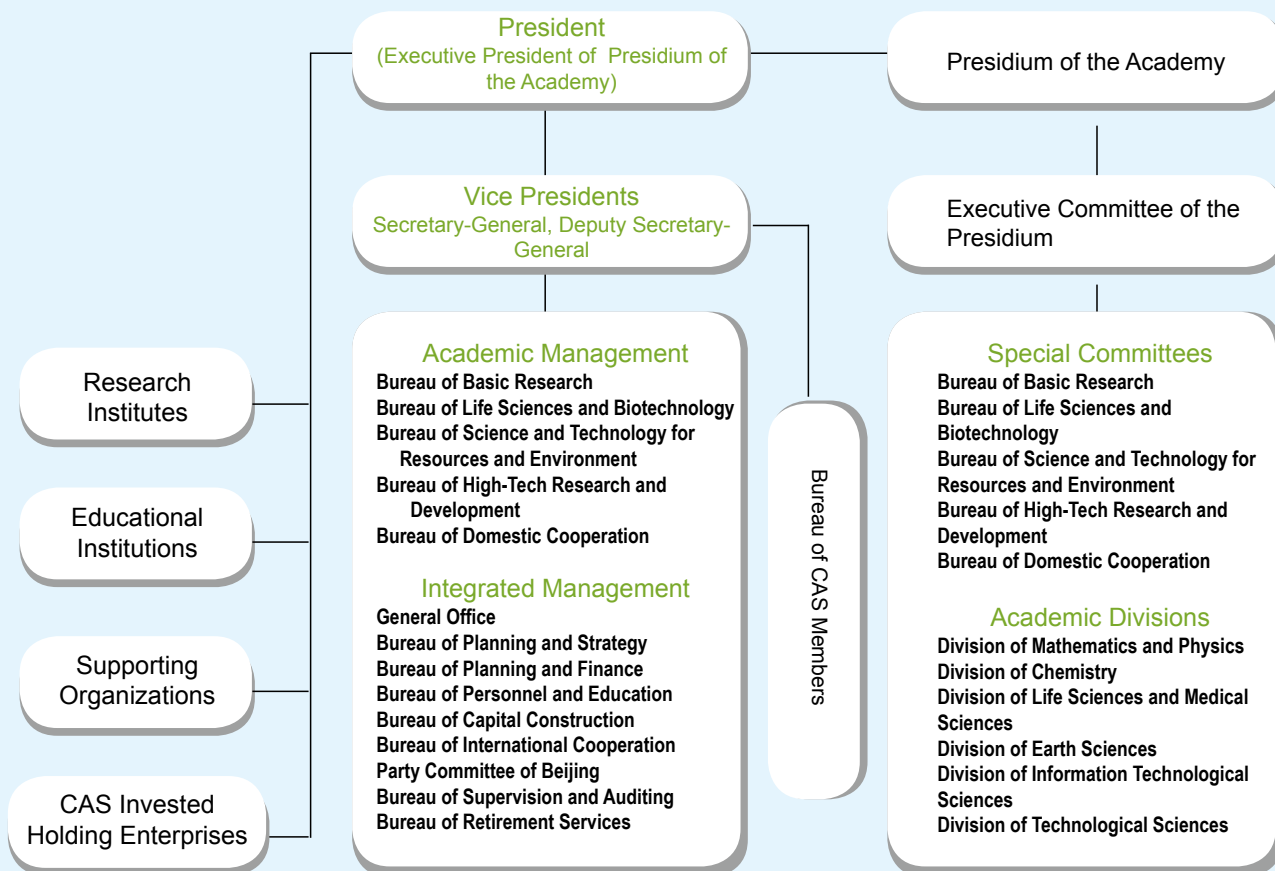
CAS members, by Academic Division and election year

	<i>Total</i>	<i>Division of Mathematics and Physics</i>	<i>Division of Chemistry</i>	<i>Division of Life Sciences and Medical Sciences</i>	<i>Division of Earth Sciences</i>	<i>Division of Information Technological Sciences</i>	<i>Division of Technological Sciences</i>
Total	1194	213	197	254	211	18	301
1955	172	30	22	24	24		36
1957	18	6	2	3	3		2
1980	283	51	51	64	64		64
1991	210	38	35	35	35		68
1993	59	10	10	10	10		18
1995	59	10	9	10	10		18
1997	58	9	10	10	10		17
1999	55	10	8	10	10		17
2001	56	10	10	9	9		15
2003	58	10	10	10	10		17
2005	51	86	9	7	7	6	9
2007	29	6	6	4	4	1	5
2009	35	6	8	5	5	4	7
2011	51	9	7	9	10	7	9

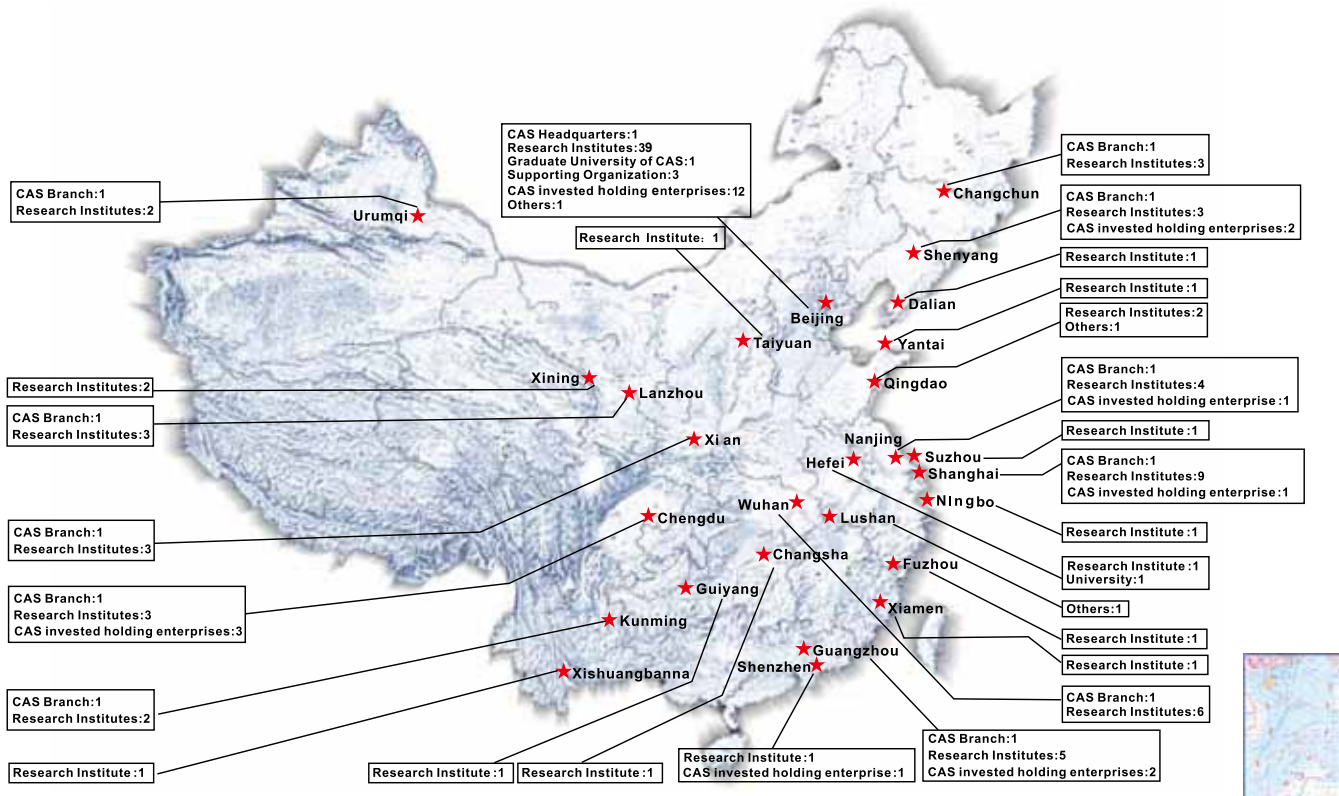
Organizations

There were 118 institutions directly under the CAS, with 98 research institutes (including three botanical gardens); five universities & supporting organizations (including two universities, one supporting organization, one documentation and information unit, and one publication unit); 12 management organizations that consist of the headquarters and branches; and three other units. There were 26 legal entities affiliated. Moreover, there were 21 CAS invested holding enterprises.

CAS organizational structure



Distribution of CAS institutions



R&D activities

Expenditure used by research institutes for scientific research and experimental development activities increased continuously, reaching RMB 27.31bn yuan (including RMB 3.568bn yuan expenditure for capital constrution of scientific research), of which the expenditure for basic research, applied research and experimental development accounted for 37.7%, 54.8% and 7.5% respectively.

Some 62,000 person-year were engaged in scientific research and experimental development activities (R&D personnel) (including the staff from institutes, scientific management personnel and technical service personnel for R&D programs), increased by 9.4%.

By the end of 2011, 28,700 research projects have been underway in CAS 98 institutes, 3,300 more than that of the previous year, including 10,000 initiated in 2011. The expenditure for research projects was RMB 16.997bn yuan, accounting for 68.2% of scientific research expenditure. In 2011, average expenditure for each project was RMB 591,700 yuan.



Personnel engaged in scientific research programs amounted to 54,100 person-year, increased 9.51% over the previous year. Of them 30,400 were staff from institutes, and 23,700 were temporary personnel. Personnel engaged in each research project were 1.88 person-year on the average. The average expenditure for each staff was RMB 314,200 yuan.

By the end of 2011, 31,400 research projects have been underway in the whole academy, 11,400 of them were initiated in 2011, and the expenditure on research projects was RMB 17.693bn yuan, increased by 18.5% over the previous year. Personnel engaged in scientific research projects amounted to 57,000 person-year. Of them, the staff from institutes increased 9.8% over the previous year.

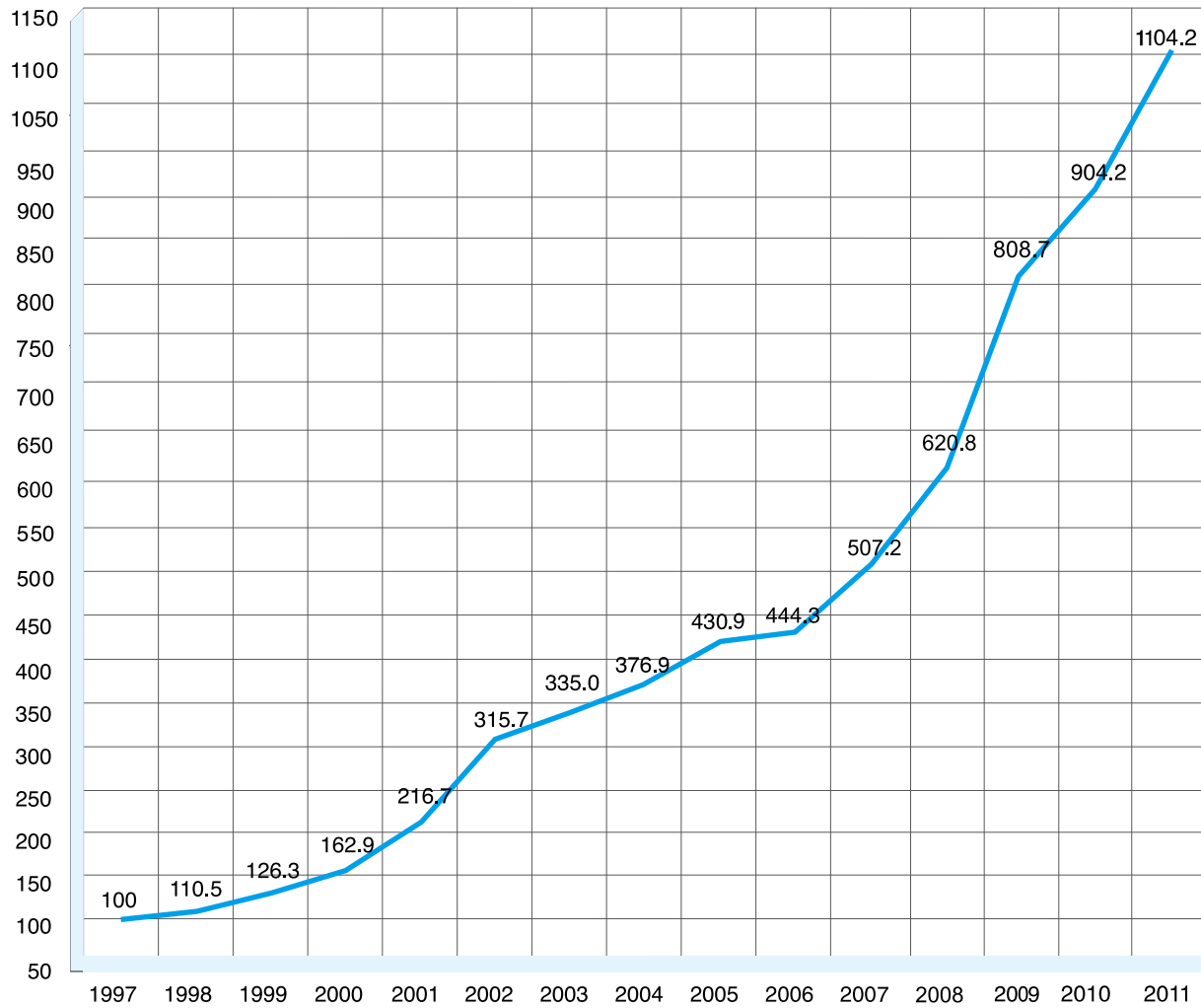
R&D expenditure of CAS scientific research institutes

Unit: RMB 100 million yuan

<i>Year</i>	<i>Total</i>	<i>Basic Research</i>	<i>%of Total</i>	<i>Applied Research</i>	<i>%of Total</i>	<i>Experimental Development</i>	<i>%of Total</i>	<i>Annual Growth Rate of R&D Expenditure</i>
1998	27.33	8.66	31.70	14.84	54.30	3.83	14.00	10.50
1999	31.24	10.62	34.00	16.81	53.80	3.81	12.20	14.30
2000	40.28	14.82	36.80	21.70	53.90	3.76	9.30	28.90
2001	53.60	21.35	39.80	28.05	52.30	4.20	7.90	33.10
2002	78.08	29.20	37.40	43.33	55.50	5.55	7.41	45.70
2003	82.84	29.99	36.20	46.86	56.60	5.99	7.20	6.10
2004	93.20	33.53	36.00	53.39	57.30	6.28	6.70	12.50
2005	106.57	36.55	34.30	62.24	58.40	7.78	7.30	14.30
2006	109.87	40.98	37.30	58.12	52.90	10.77	9.80	3.10
2007	125.44	41.40	33.00	71.50	60.00	12.54	10.00	14.10
2008	153.53	53.18	34.64	85.43	55.65	14.92	9.72	22.40
2009	199.98	71.19	35.60	114.59	57.30	14.20	7.10	29.60
2010	223.61	80.65	36.10	127.06	56.80	15.90	7.10	11.80
2011	273.08	102.97	37.70	149.73	54.80	20.38	7.50	22.10

R&D expenditure

(the year of 1997=100)



	Projects	Expenditure on Research Projects(100 million RMB yuan)	Staff Devoted to Projects(person-year)	
			Regular Staff	Temporary Staff
Total	31364	176.93	32483	24510
Research Institutes(98)	28724	169.97	30409	23689
Educational and Public Supporting Institution(5)	2640	6.96	2074	821

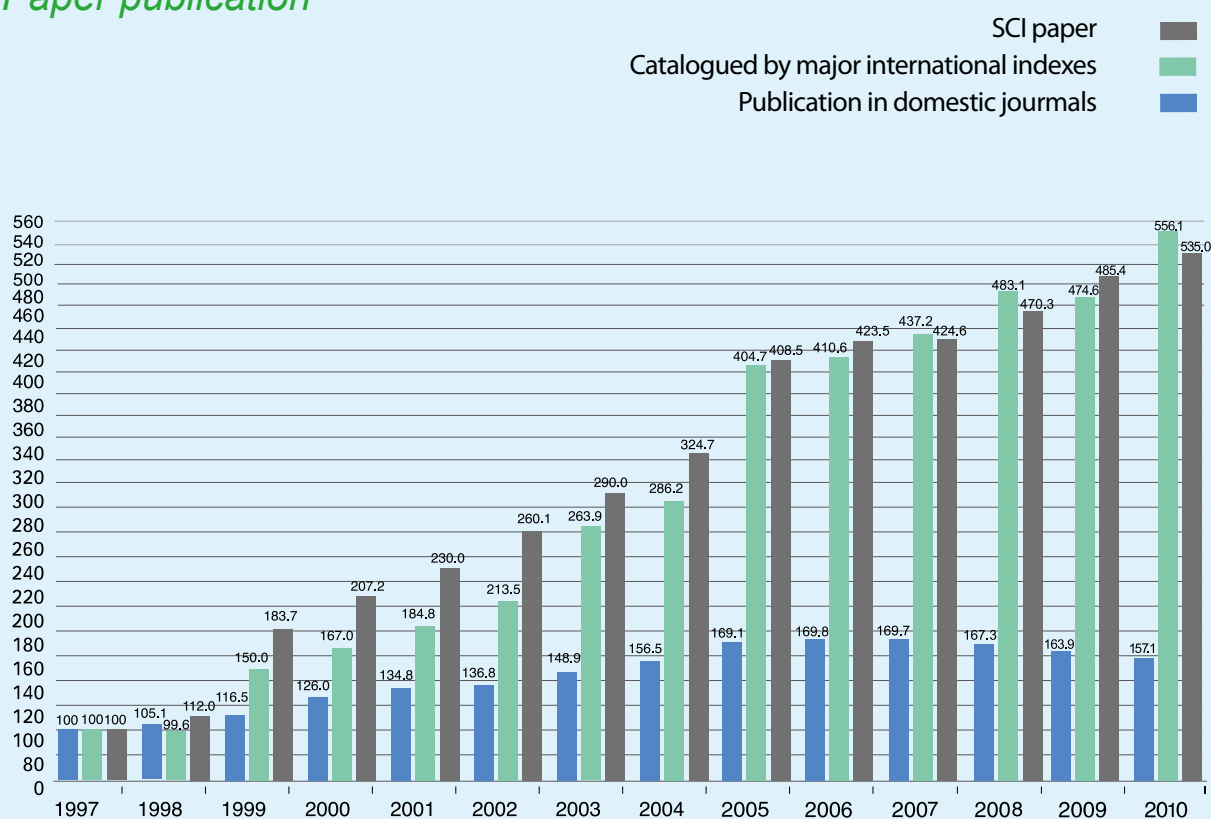
Note: Graduate students, post-doctors, and visiting staff from outside were counted as temporary staff.



Research papers, patents and achievements

Both quantity and quality of research papers were on the rise. In 2011, three major international searching tools were used to search the papers published in 2010, and the results showed that 30,586 research papers with CAS scientific personnel as the first author were catalogued, 4,482 more than that of 2009. Among them, 15,655 papers were catalogued by SCI (extended version), 1,453 more than that of 2009, 10,467 papers were catalogued by EI, 1,200 more over 2009, and 4,464 papers were catalogued by ISTP, 1,829 more than that of 2009.

Paper publication



Source: Center for Information Analysis, Institute of S&T Information of China

Note: 1. "Catalogued by major international indexes" includes those papers catalogued by SCI, EI, ISTP.

2. Searched SCI paper has changed from CD version to SCIE extended version since 1999.

3. Only papers with CAS scientific personnel as the first author were counted.

In 2010, 25,604 papers were cited by SCI (CD version), 609 more than that of 2009, and in 81,489 times (SCI recorded the citation of the papers written by CAS personnel during 2005-2009), increased by 15.5% over 2009. The cited frequency of papers in CAS was 3.18.

About 12,846 papers written by CAS scientific personnel were published by 1,998 domestic journals in 2010, 549 less than that of 2009.

Publication and citation of research papers

Year	National Total			SCI Paper	CAS		
	Catalogued by Major International Indexes (article)	Publication in Domestic Journals (article)	Catalogued by Major International Indexes (article)		SCI Cited Internationally		Publication in Domestic Journals (article)
					article	times	
1998	24038	133341	5478	3277	3815	7534	8593
1999	38924	162779	8249	5376	4250	8582	9526
2000	41895	180848	9186	6063	5219	11046	10299
2001	49817	203229	10165	6725	6135	13658	11022
2002	62715	240117	11740	7611	7756	17624	11181
2003	80563	274438	14516	8632	9772	24746	12169
2004	75774	311737	15738	9500	9860	24746	12790
2005	152825	355070	22257	11952	15053	41934	13826
2006	171878	404858	22581	12392	17620	51926	13885
2007	193003	463122	24045	12432	19853	62009	13872
2008	270878	470020	26569	13761	23282	78600	13673
2009	280158	521327	26104	14202	24995	96405	13395
2010			30586	15655	25604	81489	12846



The number of patent applications was increasing continuously in 2011. The CAS applied for 9,487 patents, including 528 foreign patent applications, up 26.04% over the previous year. Domestic invention patent applications amounted to 8,178, an increase of 23.76%, utility model patent applications amounted to 729 and design patents were 52.

A total of 4,522 patent licenses were granted, including 73 foreign patent licenses, and the total number of patent licenses increased by 32.77% over the previous year. Domestic invention patent licenses amounted to 3,744, utility model patent licenses 659 and design patent licenses 46.

Number of patents applied and granted in China

Year	Applied				Granted			
	Total	Invention	Utility Model	Exterior Design	Total	Invention	Utility Model	Exterior Design
1998	1059	694	346	19	264	76	176	12
1999	1127	775	340	12	472	108	360	4
2000	1701	1218	468	15	802	442	352	8
2001	2010	1526	477	7	920	455	453	12
2002	2523	2002	502	19	1001	583	413	5
2003	3210	2617	578	15	1522	1055	450	17
2004	3546	2944	567	35	2034	1484	521	29
2005	3899	3328	492	79	1948	1498	429	21
2006	4008	3510	487	11	2098	1536	517	45
2007	4339	3907	426	6	2179	1659	508	12
2008	5428	4826	582	20	2637	2072	554	11
2009	6018	5481	529	8	3133	2579	539	15
2010	7572	6608	568	21	3406	2731	604	13
2011	9487	8178	729	52	4522	3744	659	46

Number of patents applied and granted in China

- Applications
- Applications of Patent Invention
- Granted Number
- Granted Patents of Invention

