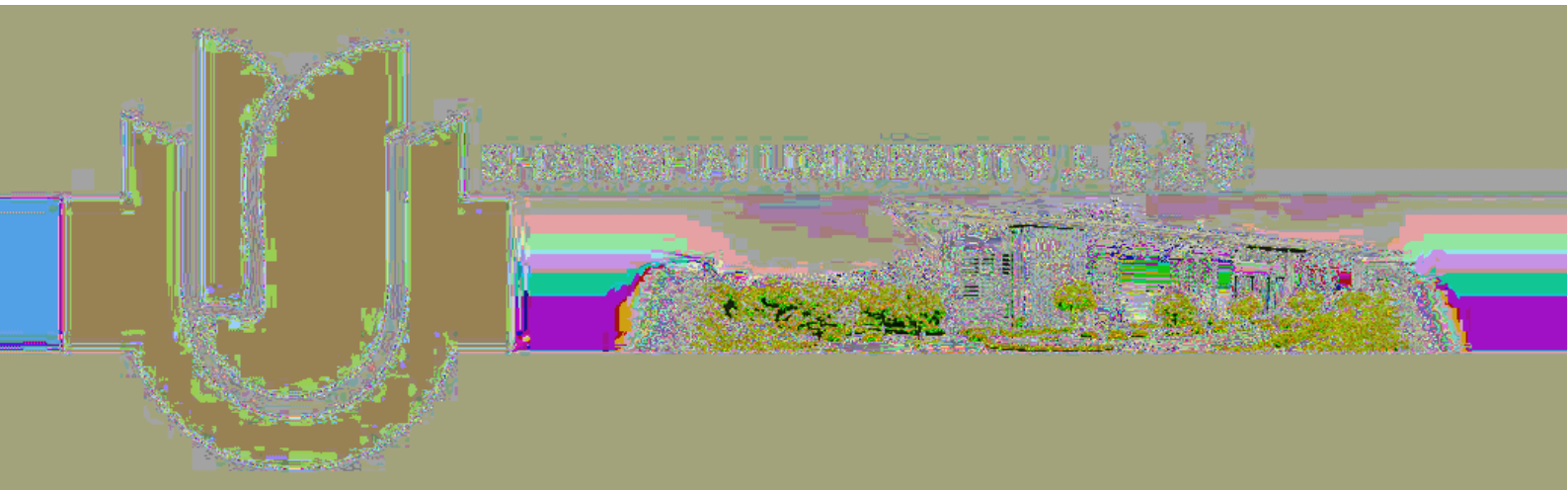




2013-2014学年学位

研究生教育



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2013-2014

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2013

1. 2009-2010 2010.12
2. 2010-2011 2012.04
3. 2011-2012 2012.12
4. 2012-2013 2003.12
5. 2010 2010
6. 2011 2011
7. 2012 2012
8. 2013 2013
9. 2013 2013
10. “ ” 43 -66 2010-2013
11. 2012.09
12. (2010-2020 ) 2010.06
13. (2010-2020 ) 2010.10
14. “ ” 2020 2010.12
15. 2006.07



2013-2014

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1.1		26.8%	25%	1.8
2014	6		17	20
		79		42
174		13	19	
	67		8	
2014	6		20	4
	9		7	2012
42		18	40%	5
			1505	26
430		95	28.57%	5.92
				167
36			23	8
	132	22		6
			8236	698
		663.1		
	“985	” “211	”	
2014		11799	867	3691
382			2672	529
		4.42:1	5.1:1	
			370	
300		67	3691	18.15%
		11,036	799	
1578	103		8420	3793



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**2020**

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“985 ” “211 ” 2012 “211  
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2014 02

020200		11.03-		080100		00.12-	
020201	1	11.03-		080101	45	00.12-	
020202	2	11.03-		080102	46	84.01-	
020203	3	11.03-		080103	47	93.12-	
020204	4	11.03-		080104	48	00.12-	
020205	5	11.03-		080500		11.03-	
020206	6	11.03-		080501	49	11.03-	
020207	7	11.03-		080502	50	98.06-	
020208	8	11.03-		080503	51	11.03-	
020209	9	11.03-		080600		11.03-	
020210	10	11.03-		080601	52	11.03-	
<b>030300</b>		11.03-		080602	53	93.12-	
030301	11	00.12-		080603	54	11.03-	
030302	12	11.03-		080904	55	81.11-	
030303	13	06.01-		081000		03.09-	
030304	14	11.03-		081001	56	98.06-	
<b>050100</b>		11.03-		081002	57	03.09-	
050101	15	11.03-		081203	58	06.01-	

050102	16	11.03-		080200		03.09-	
050103	17	11.03-		080201	59	00.12-	
050104	18	11.03-		080202	60	98.06-	
050105	19	06.01-		080203	61	90.11-	
050106	20	03.09-		080204	62	03.09-	
050107	21	11.03-		080804	63	03.09-	
050108	22	11.03-		081100		11.03-	
050300		11.03-		081101	64	90.11-	
050301	23	11.03-		081102	65	11.03-	
050302	24	06.01-		081103	66	11.03-	
060200		11.08-		081104	67	11.03-	
060201	25	11.03-		081105	68	11.03-	
060202	26	11.03-		080300		11.03-	
060203	27	11.03-		080301	69	11.03-	
060204	28	11.03-		080302	70	06.01-	
060205	29	11.03-					
060206	30	06.01-		081402	71	06.01-	
060300		11.08-					
060301	31	11.03-		120100		06.01-	
070100		06.01-		120101	72	06.01-	
070101	32	06.01-		130400		11.08-	
070102	33	85.12-T		130401	73	06.01-	
070103	34	06.01-		130500		11.08-	
070104	35	06.01-		130501	74	11.03-	
070105	36	90.11-		130100		11.08-	
070200		11.03-		130101	75	11.03-	
070201	37	11.03-		130300		11.08-	
070202	38	11.03-		130301	76	11.03-	
070203	39	11.03-		130302	77	06.01-	
070204	40	11.03-		130303	78	11.03-	
070205	41	06.01-					
070206	42	11.03-		030505	79	06.01-	
070207	43	11.03-					
070208	44	84.01-					

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2013 12

010100		11.03-		071100		11.03-	
010101	1	03.09-		071101	100	11.03-	
010102	2	11.03-		071102	101	00.12-	
010103	3	11.03-		071300		11.08-	
010104	4	11.03-		071301	102	11.08-	
010105	5	11.03-		071400		11.08-	
010106	6	11.03-		071401	103	11.08-	
010107	7	11.03-		080100		00.12-	
010108	8	06.01-		080101	104	00.12-	

020100		11.03-		080102	105	81.11-	
020101	9	06.01-		080103	106	84.01-	
020102	10	11.03-		080104	107	00.12-	
020103	11	11.03-		080200		03.09-	
020104	12	11.03-		080201	108	81.11-	
020105	13	03.09-		080202	109	93.12-	
020106	<sup>14</sup>	11.03-		080203	110	81.11-	
020200		06.01-		080204	111	03.09-	
020201	15	06.01-		080400		06.01-	
020202	16	06.01-		080401	112	84.01-	
020203	17	06.01-		080402	113	81.11-	
020204	18	98.06-		080500		06.01-	
020205	19	96.06-		080501	114	90.11-	
020206	20	96.06-		080502	115	86.07-	
020207	21	06.01-		080503	116	86.07-	
020209	22	06.01-		080600		11.03-	
020210	23	06.01-		080601	117	11.03-	
030100		11.03-		080602	118	84.01-	
030101	24	03.09-		080603	119	86.07-	
030102	25	11.03-		080800		11.03-	
030103	26	98.06-		080801	120	81.11-	
030104	27	99.12-		080802	121	11.03-	
030105	28	06.01-		080803	122	11.03-	
030106	29	11.03-		080804	123	86.07-	
030107	30	11.03-		080805	124	86.07-	
030108	31	11.03-		080900		11.03-	
030109	32	11.03-		080901	125	11.03-	
030110	33	11.03-		080902	126	84.01-	
030300		06.01-		080903	<sup>127</sup>	93.12-	
030301	34	96.06-		080904	128	81.11-	
030302	35	06.01-		081000		03.09-	
030303	36	03.09-		081001	129	81.11-	
030304	37	03.09-		081002	130	96.06-	
030500		06.01-		081100		06.01-	
030501	38	00.12-		081101	131	81.11-	
030502	39	06.01-		081102	<sup>132</sup>	96.06-	
030503	40	06.01-		081103	133	06.01-	
030504	41	06.01-		081104	134	06.01-	
030505	42	00.12-		081105	135	06.01-	
030506	<sup>43</sup>	2008		081200		06.01-	
050100		06.01-		081201	136	96.06-	
050101	44	03.09-		081202	137	86.07-	
050102	45	06.01-		081400		06.01-	
050103	46	00.12-		081401	138	03.09-	
050104	47	06.01-		081402	139	00.12-	

050205	56	11.03-		081705	148	06.01-	
050206	57	11.03-		082700		11.03-	
050207	58	11.03-		082701	149	11.03-	
050208	59	11.03-		082702	150	11.03-	
050209	60	11.03-		082703	151	06.01-	
050210	61	11.03-		082704	152	11.03-	
050211	62	99.12-		083000		06.01-	
050300		06.01-		083001	153	03.09-	
050301	63	03.09-		083002	154	93.12-	
050302	64	00.12-		083100		06.01-	
060200		11.08-		083100	155	86.07-	
060201	65	06.01-		083201	156	00.12-	
060202	66	06.01-		083500		11.08-	
060203	67	06.01-		083500	157	11.08-	
060204	68	98.06-		120100		06.01-	
060205	69	03.09-		120100	158	90.11-	
060206	70	03.09-		120200		06.01-	
060300		11.08-		120201	159	96.06-	
060300	71	06.01-		120202	160	03.09-	
070100		06.01-		120203	161	03.09-	
070101	72	03.09-		120204	162	06.01-	
070102	73	81.11-		120401	163	03.09-	
070104	74	86.07-		120500		06.01-	
070105	75	86.07-		120501	164	06.01-	
070200		06.01-		120502	165	99.12-	
070201	76	06.01-		120503	166	03.09-	
070202	77	06.01-		130100		11.08-	
070203	78	06.01-		130101	167	03.09-	
070204	79	06.01-		130200		11.08-	
070205	80	84.01-		130201	168	06.01-	
070206	81	06.01-		130202	169	06.01-	
070207	82	90.11-		130300		11.08-	
070208	83	84.01-		130301	170	06.01-	
070300		06.01-		130302	171	00.12-	
070301	84	03.09-		130303	172	99.12-	
070302	85	03.09-		130400		11.08-	
070303	86	81.11-		130401	173	96.06-	
070304	87	86.07-		130500		11.08-	
070305	88	00.12-		130501	174	96.06-	
071000		11.03-					
071001	89	11.03-					
071002	90	11.03-					
071003	91	11.03-					
071004	92	11.03-					
071005	93	11.03-					
071006	94	11.03-					
071007	95	11.03-					
071008	96	11.03-					
071009	97	11.03-					
071010	98	03.09-					
071011	99	11.03-					



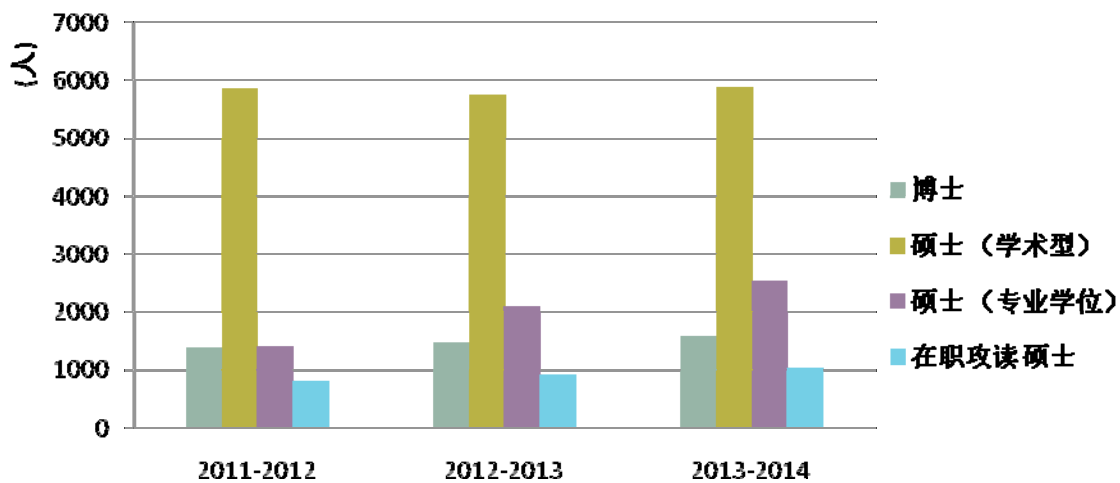
3.

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9 7 2-5  
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2014 7 11,036  
1578 ( 501 ) 8420 3793



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2013-2014



		2000 1500	1500 1000	230	28.6
		10000 5000		4	2
<b>4</b>				<b>505</b>	<b>617.6</b>

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		/			
SANDVIK		1 4	1500 1000	5	5.5
		8000	3	3	2.4
SSAB		5	5000	5	2.5
		1 1500	3000 5	4 1000	10
		10	500	10	0.5
		3 10	1500 1000	13	1.45
		2 3	6000 3000	5	2.1
				10	1
		800;	500	13	0.8
		1000	5	5	0.5
		5000; 10	2000	10	5.5
		3000	6	6	1.8
		2000	6	6	1.2
“CIETAC ”		5000; 2000	3000 3	3	1
		5000 2000-3000	1 3000*3,2000*8	12	3
		1500; 12	3000	12	2.1
		3000 2000	1 8	9	1.9
		2000; 500;	1000 250	30	2.4
		3000; 2	1000	2	0.4
		8000 1000	3 ; 10	2000 5	18
<b>20</b>				<b>187</b>	<b>41.85</b>

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2-10

		/		
“ ”		7000	5	3.5
		1500	1	0.15
2			6	3.65

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		/		
		1800/2000	615	1042.68
		237.5/257.5/277.5	7621	1958.02
		200-300	3989	92.5
		200-500	805	28.6
		2500	8	2
5			13038	3123.8

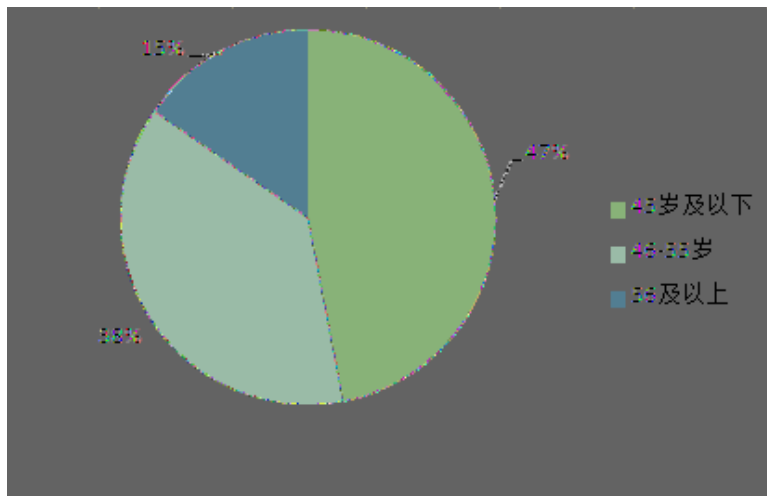
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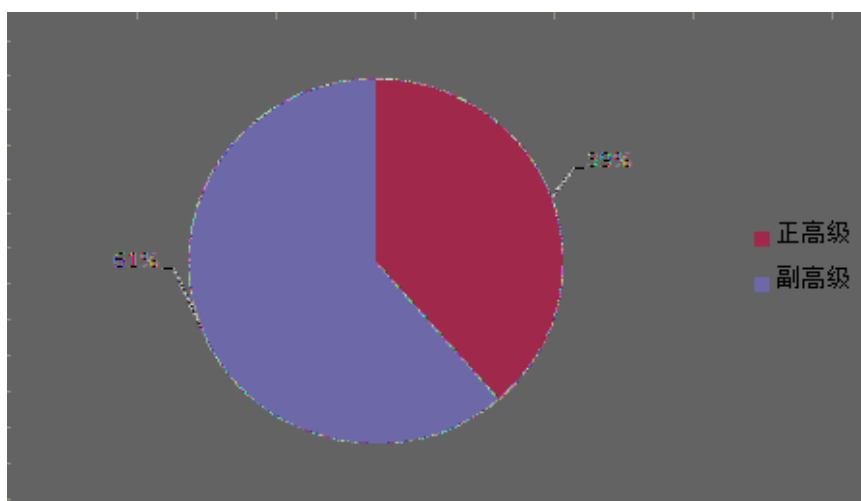
1505

2-2



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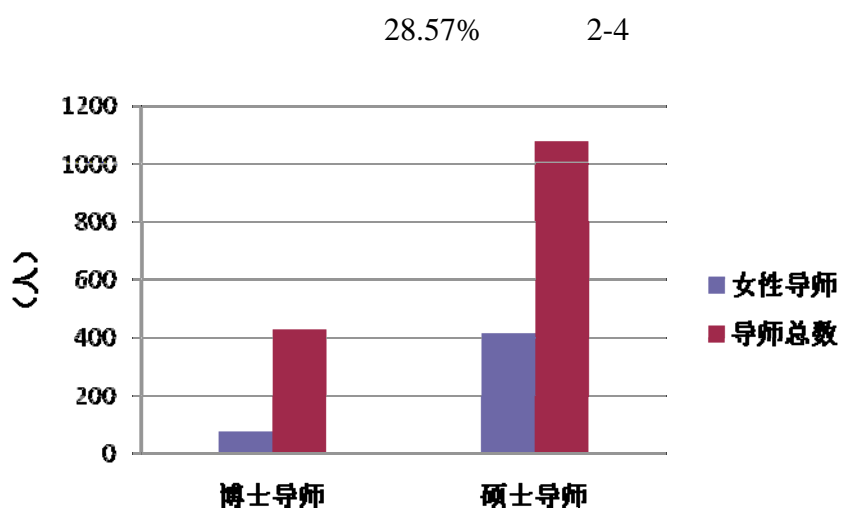


2-3

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2013

430



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2-12

	430	1578	3.67
	1075	8420	7.83
	1505	9998	6.64

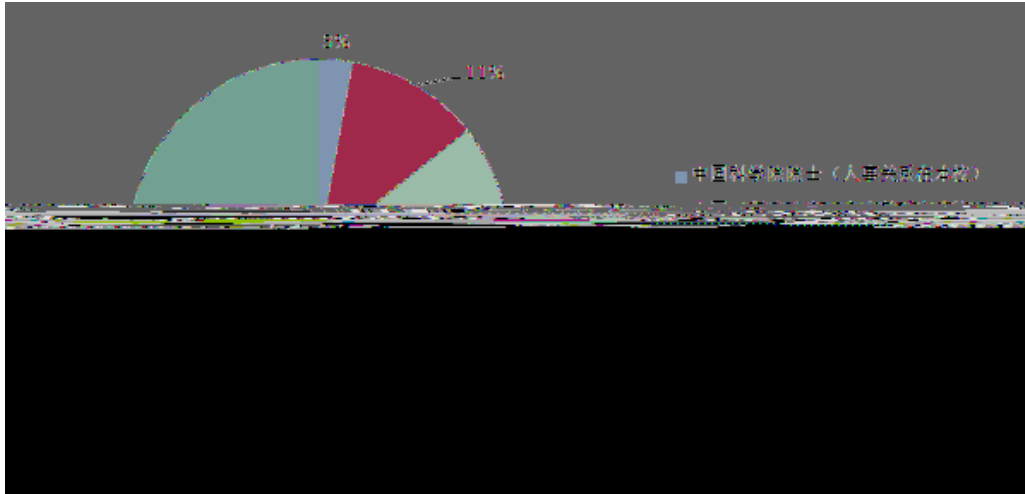
3.

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35

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2013

[ (2004)2 ]

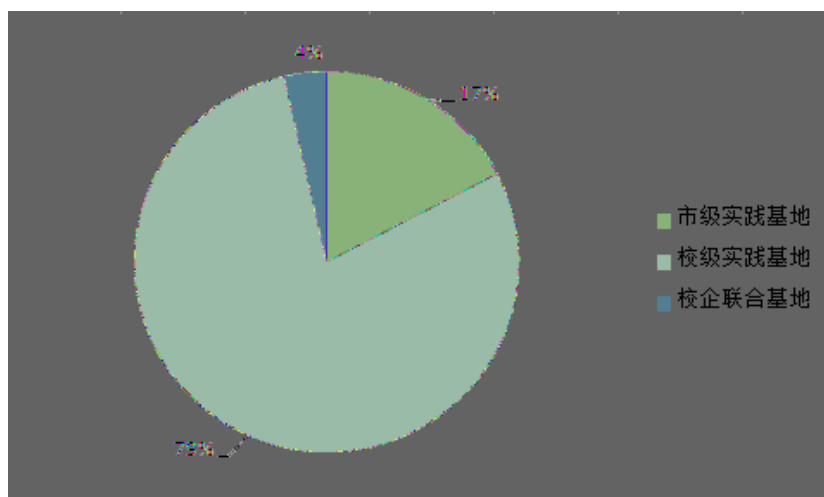
2-13 2013

	2013	2012	2004
	17.37	↑	18
	85.6%	↑	30
	14.99	↑	14
	22392.34	↑	5000
	71.65	↓	100
	51.1%	↓	30
	46.70	↓	54
	9.48	↑	6.5
	53.14	↑	10
	12.87%	↓	10
	0.21	↓	4

1

“2012-2013

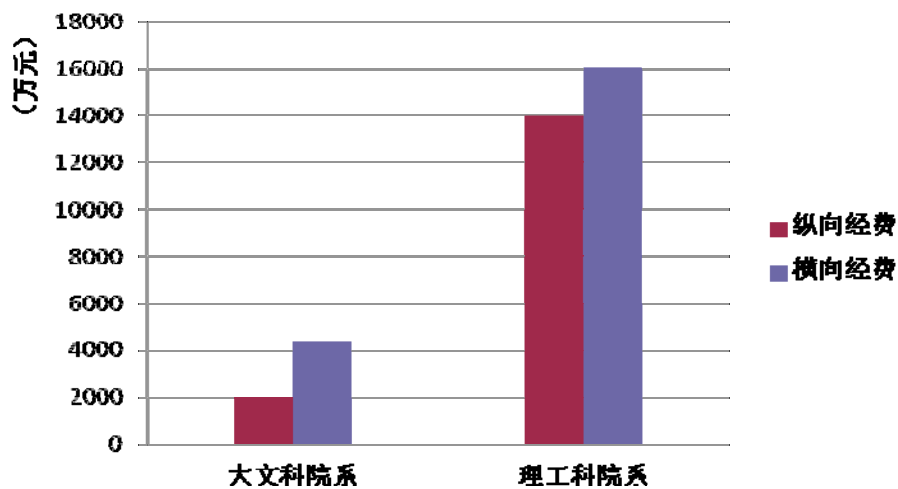
2819 2 53300 39354  
 2013 9  
 2.  
 167 29  
 23 132 ( )  
 116 6 1918



2-6

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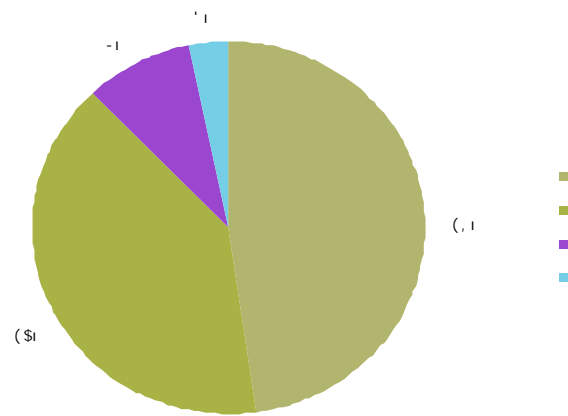
2-7

1.

2013

195,134.59

2-8



2-8

ÎC@EVD

2012 391 4235  
 363 4166  
 93% 80%  
 44 42 95% 211  
 54% 211 65%  
 20  
 2-14

**2-14**

		1	2	3	4	5
		0	0	3	5	10
	985	4.5	4.1	7.5	5.3	3.3
	211	1.9	1.8	3.6	3.1	2.9
		0.9	0.9	1.8	1.7	1.8
		0	0	0.1	0.1	0.3
	985	5	7	8.8	7	4.3
	211	2.4	3.1	4.7	3.7	3.1
		1.4	1.9	2.8	2.3	2
		0	0	0	0	0

“211 ” “985 ” “ ” “ ”

2013.06

42 3 3 20% 3 5  
 4 30% 4 10 5 40% 5  
 “ ” “  
 ” “ ”

20

5

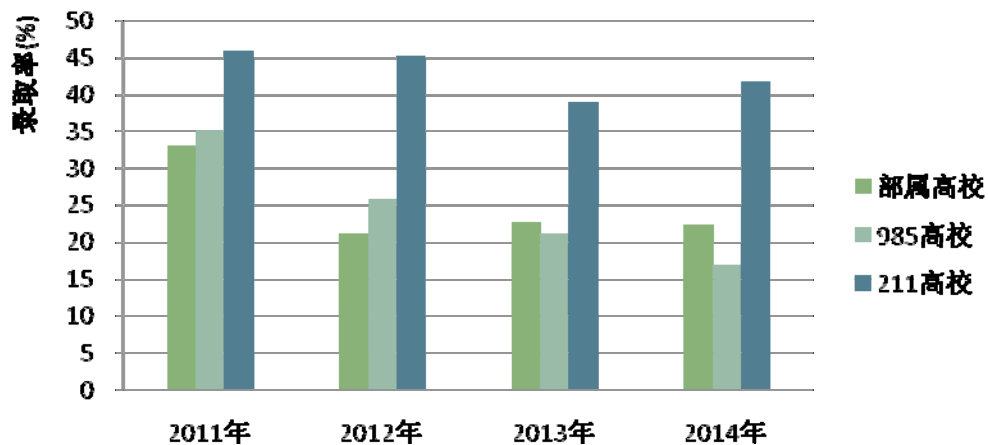
17

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3-3

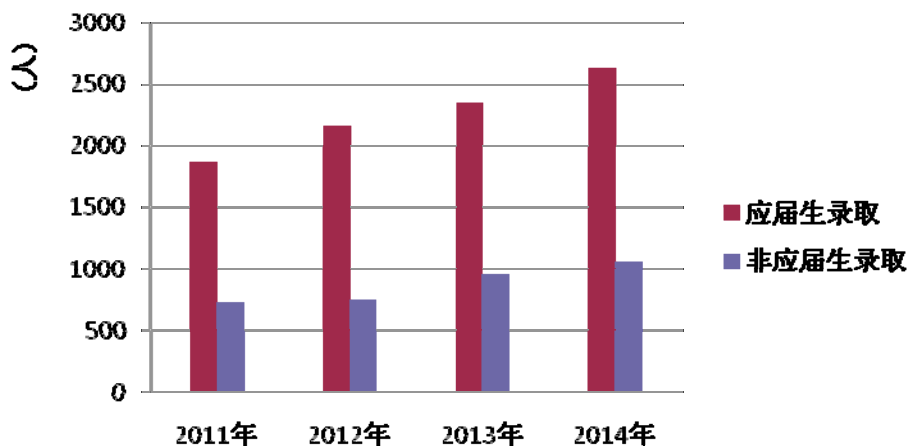


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3-4

2014

370

300

3691

18.15%

3-5



4-1

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		2	3	1-2	1
		4	5	2-4	5
		4-8	8-12	24	$\geq 12+5$ <sup>2</sup>
		X <sup>1</sup>	24	$\geq 9$	$\geq 20$
		5	2	5	3
		$\geq 15-19$	$\geq 42$	$\geq 41$	$\geq 46$

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2013-2014 1619  
2123 4-1



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4-2

		2011-2012	2012-2013	2013-2014
		326	386	402
		3	0	0
		5	0	0
		13	13	10
		14	0	11

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1.

2013 2 20  
 400 20 550  
 1000 930 2372  
 39243 1 213 800 1  
 16 118 28 23.7% 73  
 61.9% 17 14.4%  
 4-3 2013

**4-3 2013**

930	22	1	2942	40761

2.

2013 101  
 20 13 4-4

**4-4**

2012-2013	93	11	3
2013-2014	101	13	

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2013		1 3 4	
2014		3	

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2009

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167

29

23

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1000

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29	167	400	1

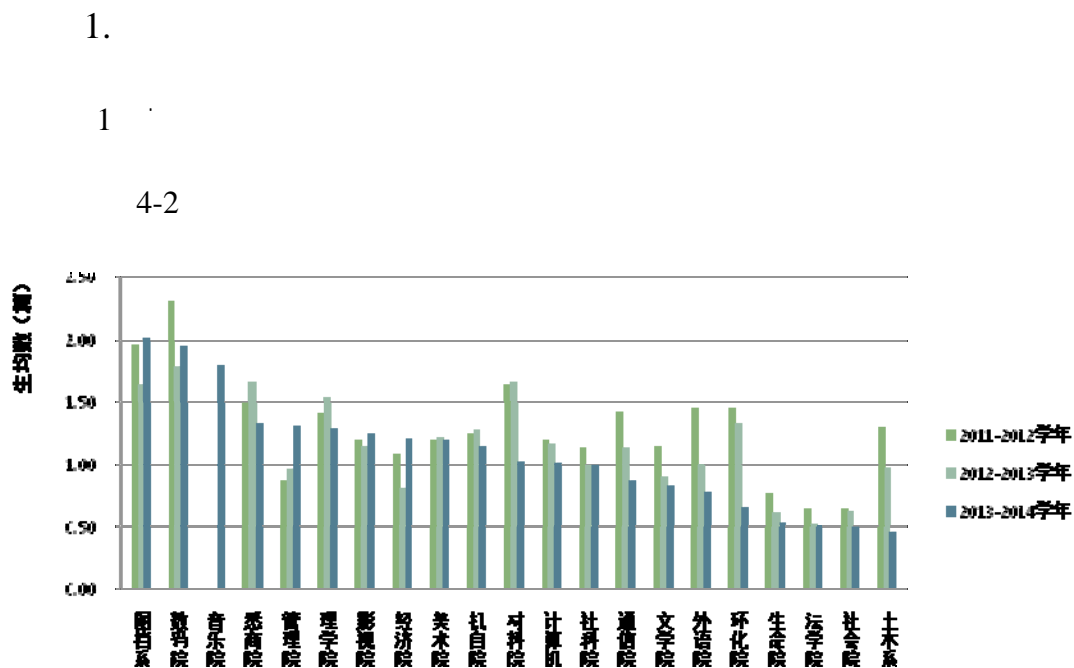
5.

71

4-7

4-7

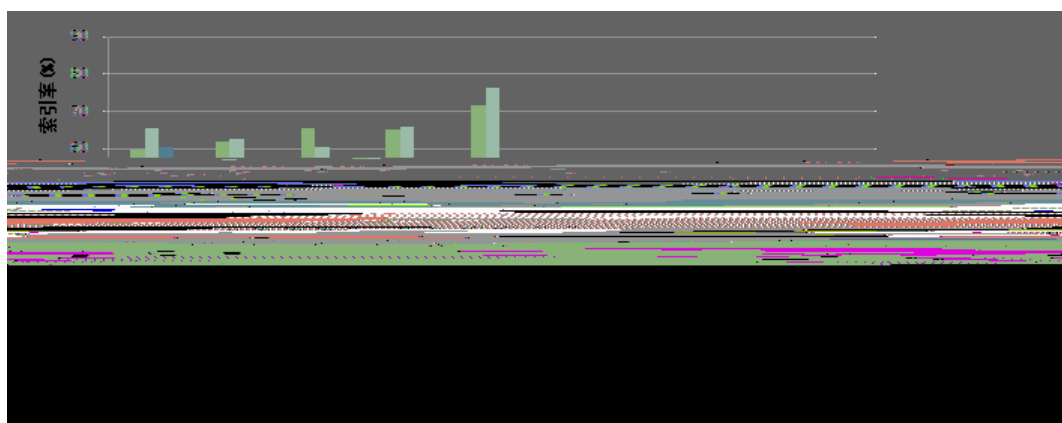
2012	31	264			
2013	24	225	6	18	
2014	16	287	A 3	B 4	C 9
	71	776			



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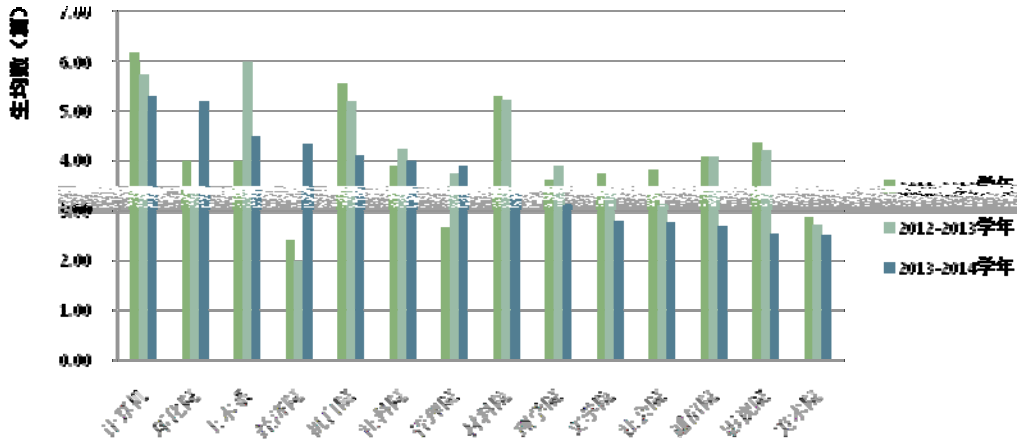


4-3

SCI EI ISTP

CSSCI

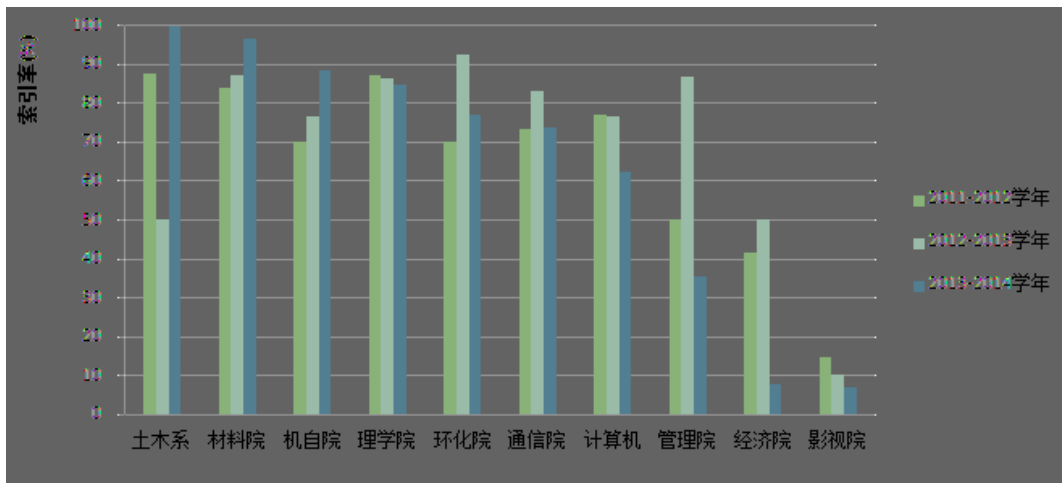
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4-5

SCI EI ISTP

CSSCI

2.

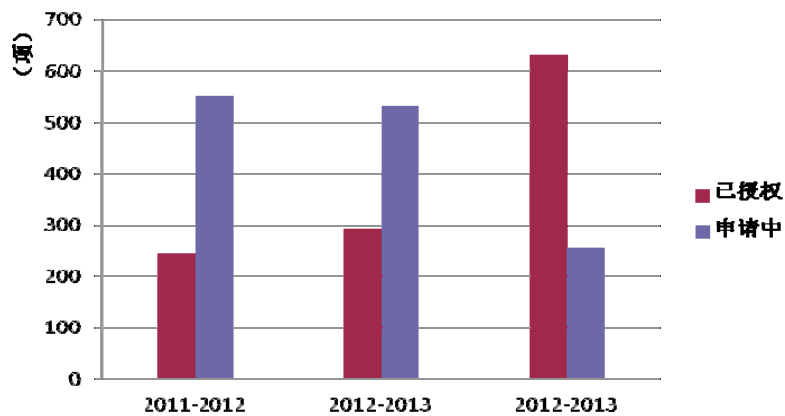
2013-2014

631

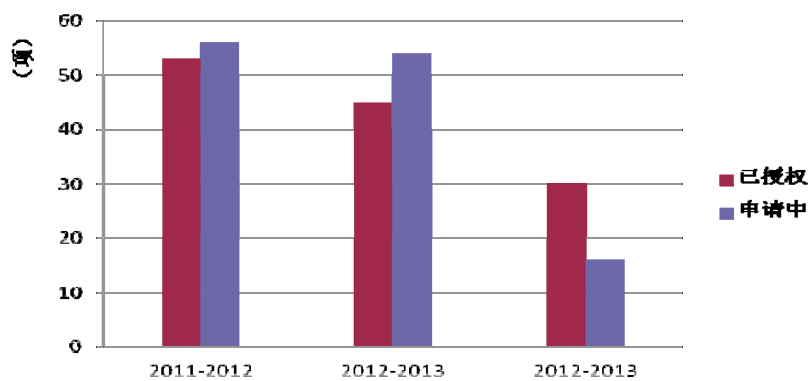
30

4-6

4-7



4-6



4-7

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2010  
 2013-2014  
 Physical Review E  
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2013-2014

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&Technology

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Creating

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**5-1** “ ”

	2011-2012	2012-2013	2013-2014
	“ ”	“ ”	“ ”
	“ ”	“ ”	
	“ ”	“ ”	

2. “ ”

“ ”

“ ” “ ” “ ”

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5-2

“ ”

5-2

“ ”

2011-2012	“ ”	“ ”	“ ”
2012-2013	“ ”	“ ”	“ ”
2013-2014	“ . . ”	“ ”	“ ”

3. “ ”

“ ”

“

” “ ” “ ”

“ ”

5-3

	5-3	2011-2014		
2011-2012	496	606	507 <sup>[1]</sup>	374 <sup>[2]</sup>
2012-2013	530	617	195 <sup>[3]</sup>	300 <sup>[3]</sup>
2013-2014	425	420	189	799

<sup>[1]</sup> :

2011

<sup>[2]</sup>

2012

<sup>[3]</sup> 2012-2013

2013 7 30

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“ ”

2010

2011

2012

62

2013

2014

“

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5

21

35

18

67

456

33

1700

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16

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5-4      2013      2014

**5-4**

		2013				2014	
1			20		1		14
2		—	4		2		

1.

2014 4 26 “

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“

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21

“ . ”

“ . ” “ • ”



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Let it go

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Flying Free

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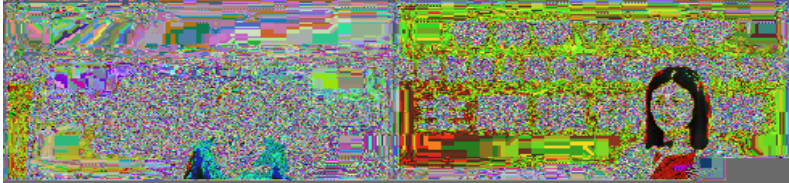
2.

“ • ”

2014 5 14

20

“ • ”



12

12

“ . ”

12

“ ”

“ ”

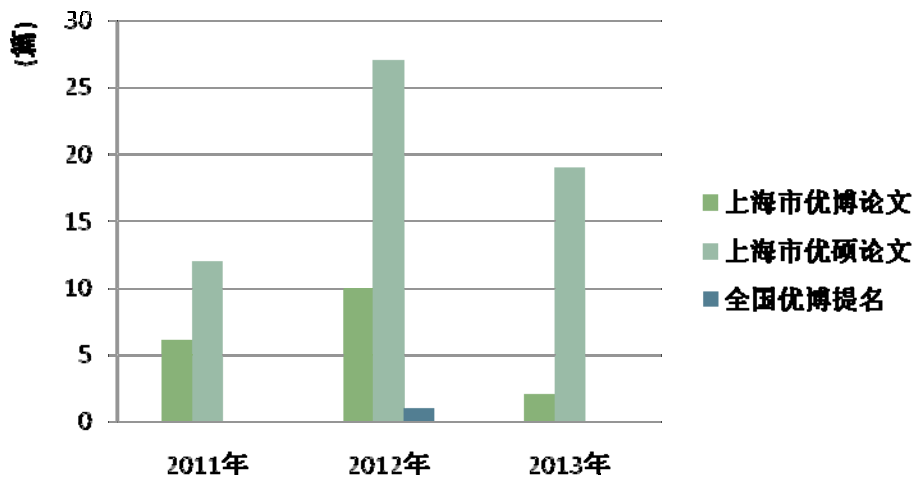
12

2013

2

19

6-1

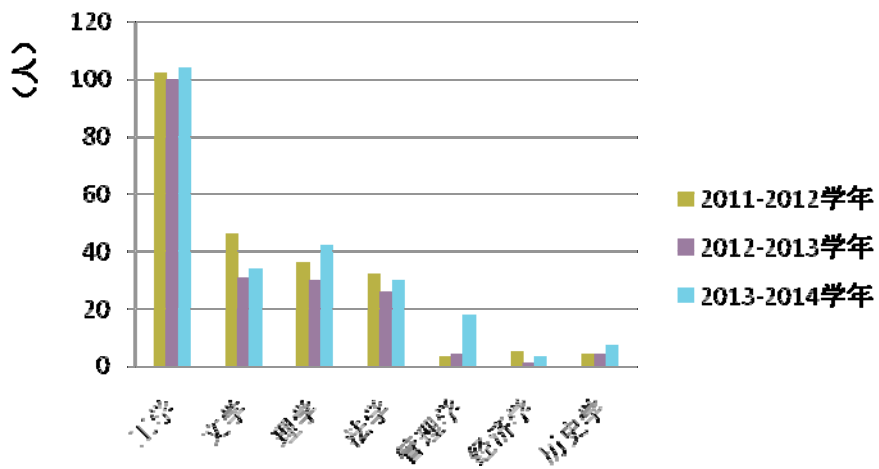


6-1

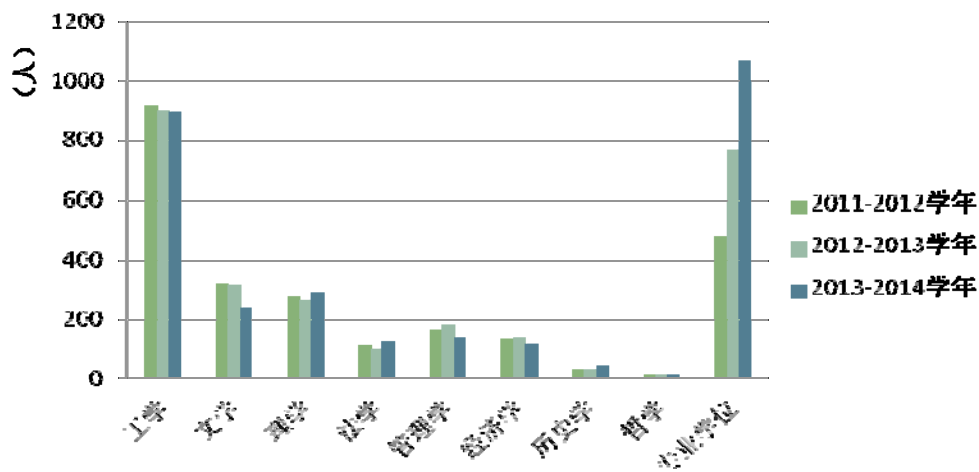
1.

6-2

6-3

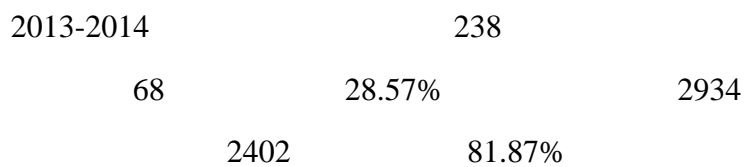


6-2

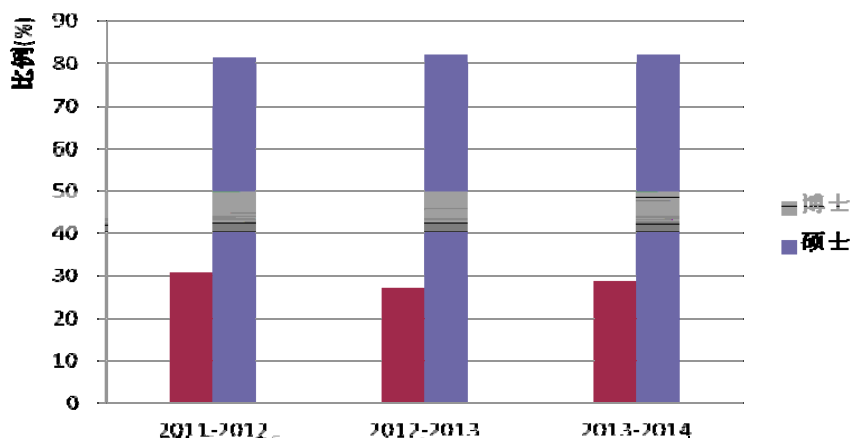


6-3

2.

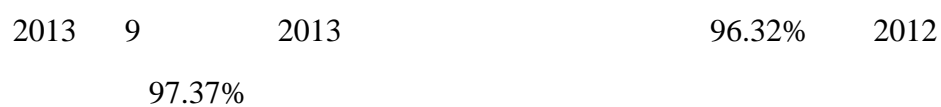


6-4



6-4

1. 2011-2013



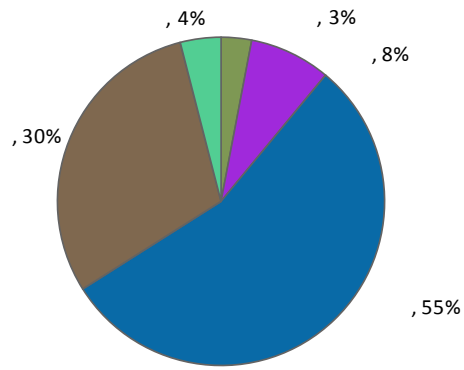
6-5



2012

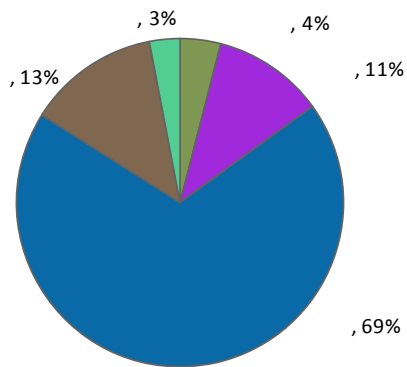
“ ” “ ” “ ”  
2012

1.



6-8 2012

2.



6-9 2012

2012

66%

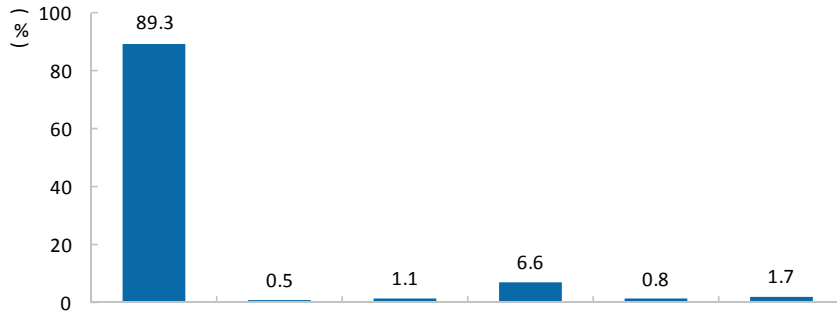
2012

84%

” “ ” “ ” “ ” “

32 20 31

1.

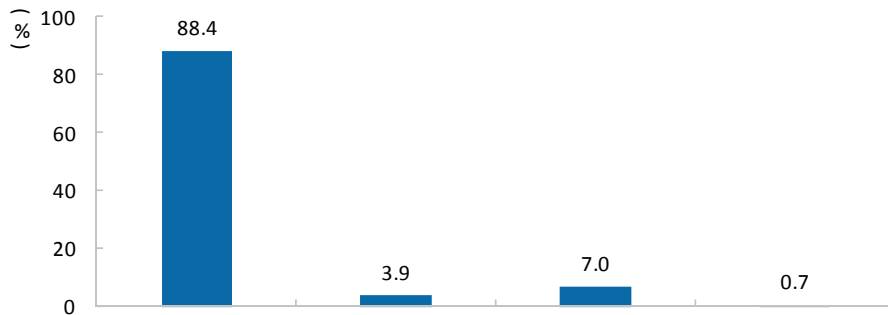


6-10 2012

100%

2012 89.3% “ ” 97.5% “ ” 6.6%

2.

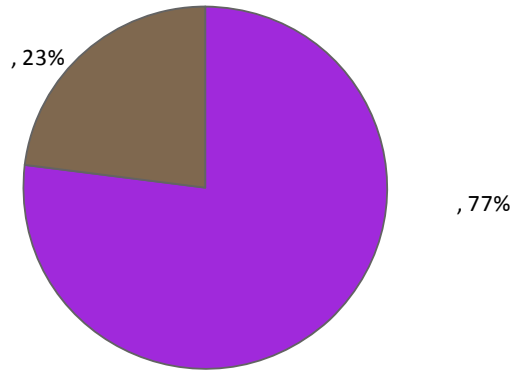


6-11 2012

100%

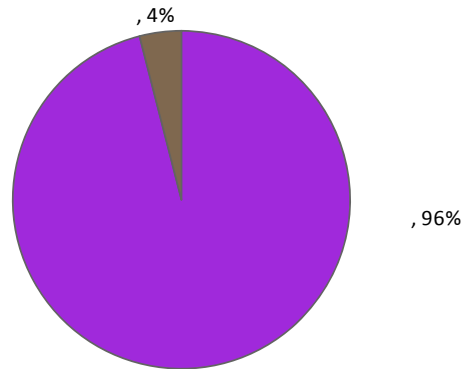
2012 92.3% “ ” 7.7%

1.



6-12 2012 %  
2012 77%  
“ ” 38% “  
” 37%

2.



6-13 2012 %  
2012 96%

1.

6-1	2012	10
	%	
/	10.6	7570
	10.4	8403
/ / / / /	8.6	7057
/	5.2	6611
/	5.0	5397
/	4.8	8124
/	4.6	4598
	4.5	5629
	3.8	7524
	3.8	5164

2012

“ /

”

10.6%

“

”

10.4%

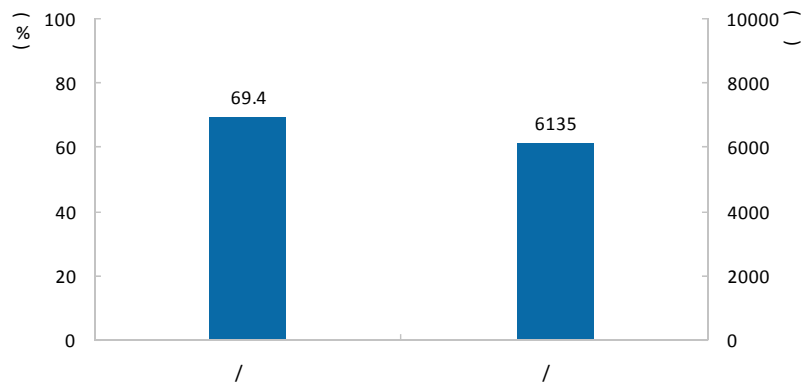
“

/ / / /

”

8.6%

2.



6-14

2012

/

2012

69.4%

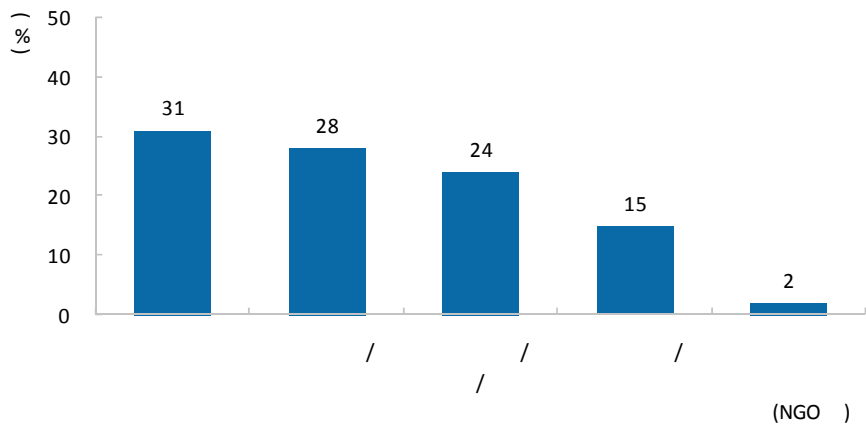
“

/

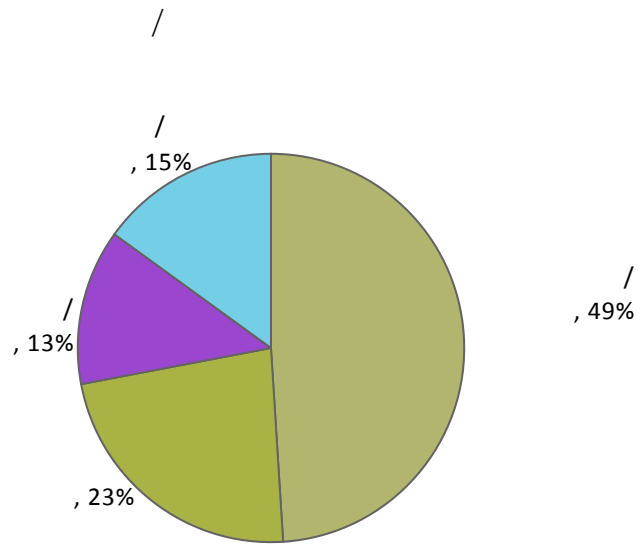
”

6135

1.







6-19 2012 /  
2012 85% /  
72% /

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1.

“

”

“

”

2.

985 211

3.

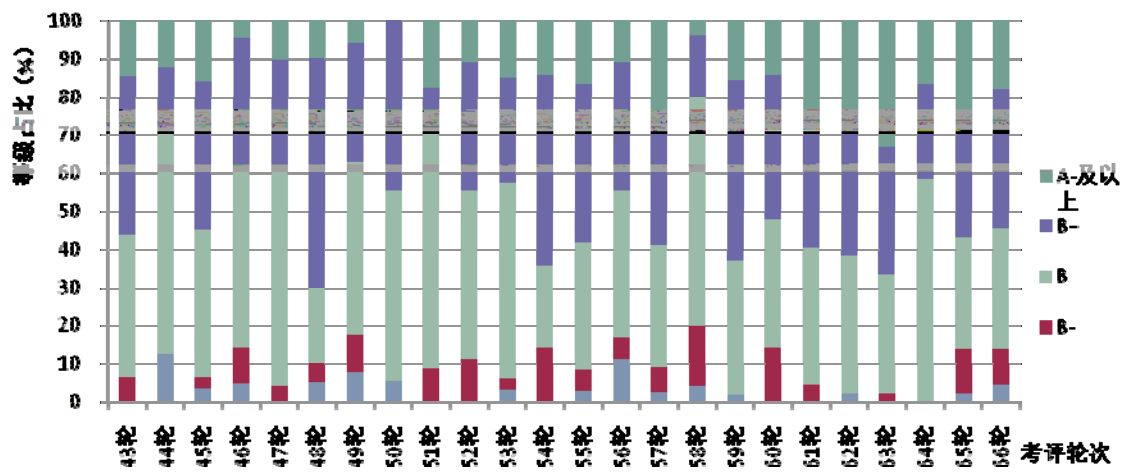
4.

“

”

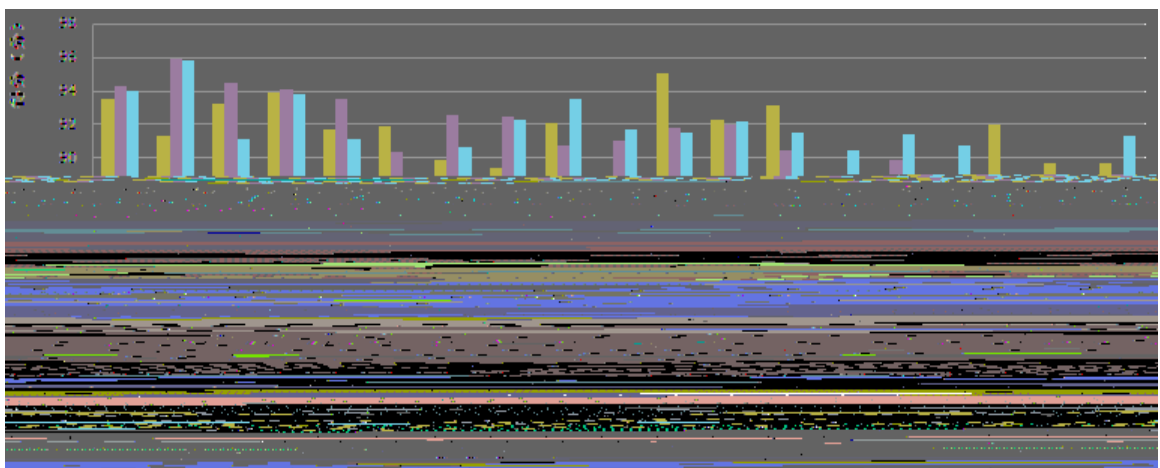
1.

7-1



7-1

2.



7-2

13-14

3.

1

7-1

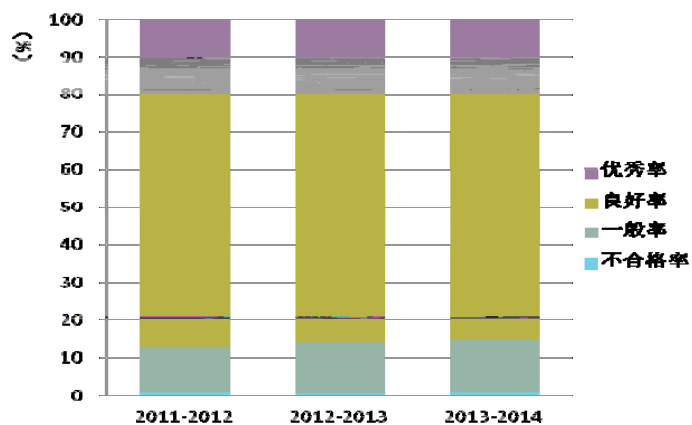
7-1

	2011-2012	2012-2013	2013-2014	2011-2012	2012-2013	2013-2014
	228	196	238	2439	2712	2934
973 863	17	17	9	95	80	78
	9	4	6	31	50	38
	4	2	7	20	30	16
	65	77	81	449	503	572
	12	6	7	35	39	32
	20	16	30	257	258	240
	1	2	4	3	8	4
					1	
	2	2	4	121	124	152
				5	8	15
	19	10	16	423	374	376
	3			4	2	6
	23	17	8	217	193	164
	53	43	66	779	1042	1241

( )

2

7-3

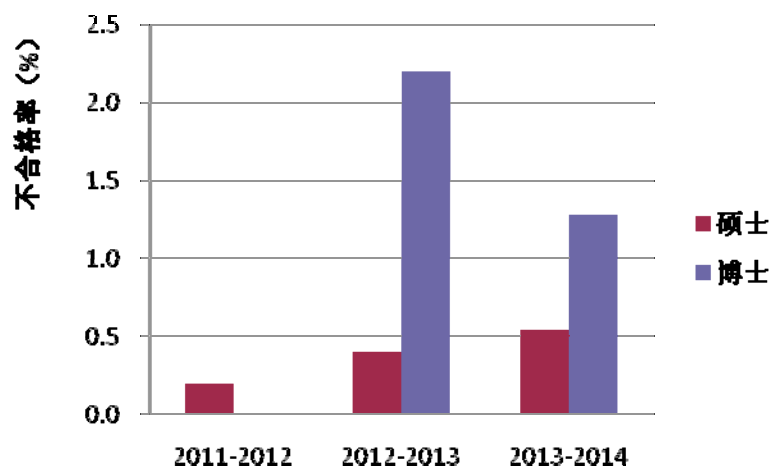


7-3

3

7-4





7-7



7-8

			“ ”	3	2	
5	3		211		“ ”	
	7	6	65		50	211
			“ ”	1.8		211
0.7		“ ”	1		211	

0.9

13 “

” “ ” 2 “ ” 3 8 “

” “ ” 6 “ ”

15 21

7-2

7-2

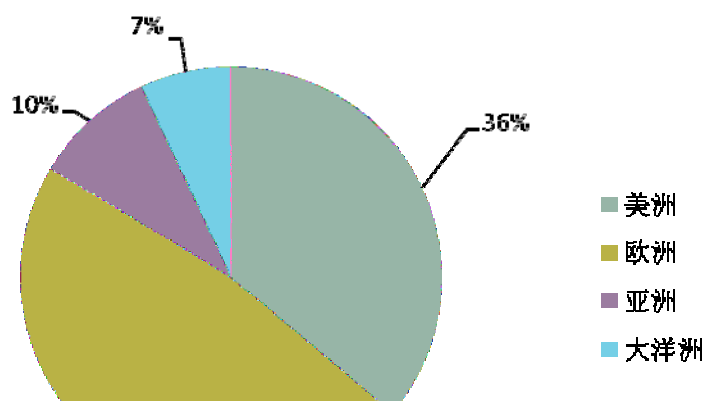
<b>20%</b>	0305		1303		1304	
<b>40%</b>	0303	0503		0701	0802	1305
	0501		0702	0801	0805	0806
		0810		0811		0830
		1205		1301		

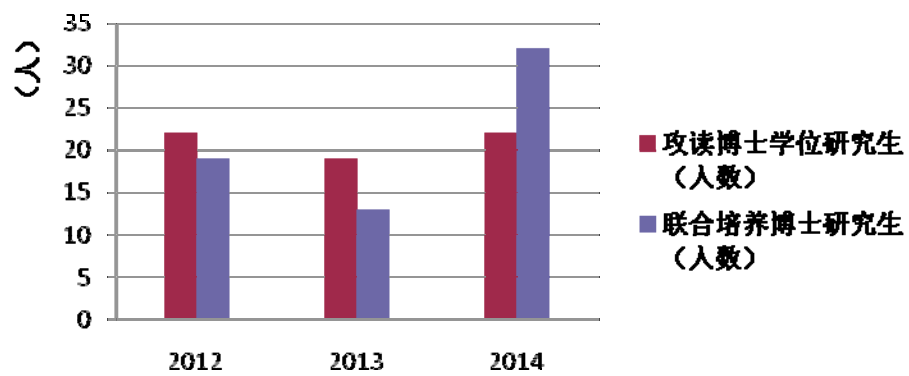
2013.06

“985 ” “211 ”

2013-2014 328  
55 273

8-1 2013





8-2

2.

2014 7

428

30

TWDM

(2)

2013



(3)

EPM Madylam



Grenoble

Eric Beaugnon

EPM Madylam

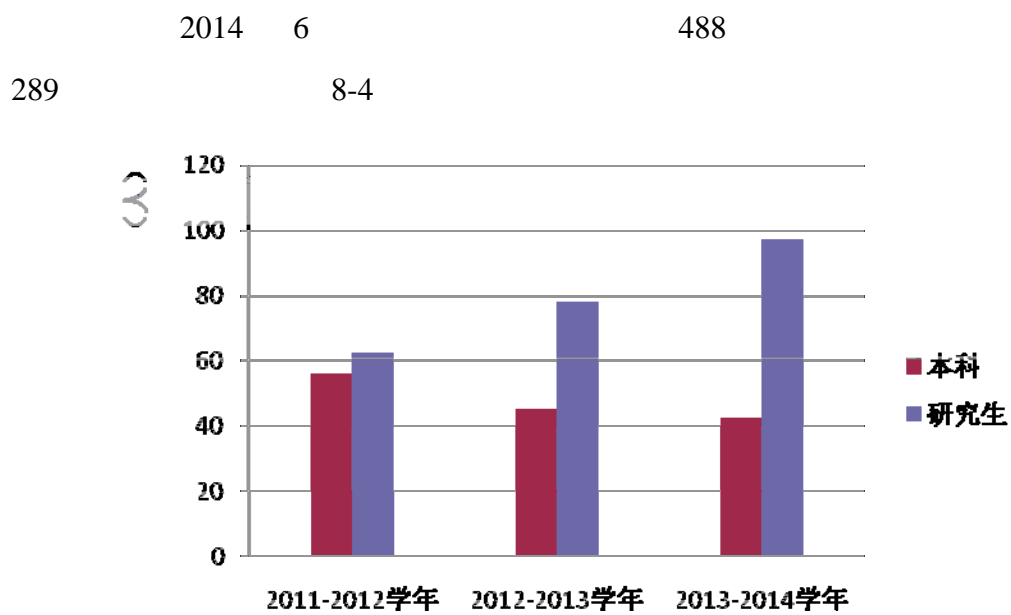
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(4)

(5)

7th International Nanotoxicology  
Congress

Fellowship poster 5 Full



8-4

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1. “ ”

2015

2. “ ”

2012

3. “ ”

4. “ ”

5. “ ”

1.

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4.

5.



1.

2.

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