

I Comparación de España con otros países según los datos de los Essential Science Indicators¹ (Thomson-ISI) (período de enero de 1996 a agosto de 2006, actualización de noviembre de 2006)

Essential Science Indicators es un producto de Thomson Scientific (ISI) que permite a los investigadores llevar a cabo análisis cuantitativos de resultados de investigación en curso y seguir la pista de las tendencias en ciencia. Esta herramienta de análisis en profundidad posibilita la obtención de datos de científicos, instituciones, países y revistas más destacados a partir de la selección de más de 11.000 revistas multidisciplinares de todo el mundo indizadas por Thomson Scientific.

I.1 Datos generales de los Ranking

En el conjunto de países recogidos en la base Thomson-ISI, entre los años 1996 y agosto de 2006, España ocupa la décima posición por número de documentos y la quinta si tenemos en cuenta sólo a los países de la Unión Europea (UE 25). Además, recibe más de 8 citas por documento en este período. Rusia y China, que se hallan por delante de España en el ranking, tienen en cambio menor número de citas por documento, no llegando a 4 en ningún caso. La posición que ocupa España, por número de citas, es la 11 frente al mundo y la 6 frente a la Unión Europea, sin embargo al considerar las citas por documento desciende a la posición 37 frente al mundo y a la 15 frente a la Unión Europea (si consideramos el Reino Unido dividido en sus cuatro regiones) (ver tabla 1).

Tabla 1. COUNTRY/TERRITORY RANKINGS IN (ALL FIELDS) (papers)

	Country/Territory	Papers	Citations	Citations Per Paper	Ranking EU		
					Papers	Citations	Citations Per Paper
1	USA	2,831,004	37,822,213	13.36			
2	JAPAN	771,573	6,298,466	8.16			
3	GERMANY	723,435	7,497,007	10.36	1	2	8
4	ENGLAND	643,557	7,565,163	11.76	2	1	5
5	FRANCE	522,015	5,171,849	9.91	3	3	10
6	PEOPLES R CHINA	400,917	1,480,743	3.69			
7	CANADA	383,199	4,194,095	10.94			
8	ITALY	358,452	3,363,216	9.38	4	4	12
9	RUSSIA	280,480	1,019,009	3.63			
10	SPAIN	254,808	2,041,705	8.01	5	6	15
11	AUSTRALIA	240,738	2,272,955	9.44			
12	NETHERLANDS	215,050	2,664,587	12.39		5	1
13	INDIA	203,989	788,852	3.87			
14	SOUTH KOREA	173,050	840,487	4.86			
15	SWEDEN	165,862	1,960,099	11.82			4
16	SWITZERLAND	154,291	2,168,127	14.05			
17	BRAZIL	125,132	627,441	5.01			
18	TAIWAN	120,447	608,561	5.05			

¹ Essential Science Indicators 2006. The Thomson Corporation. <http://www.in-cites.com/a-prod/esi.html> [consulta: 28 dic 2006].

	Country/Territory	Papers	Citations	Citations Per Paper	Ranking EU		
					Papers	Citations	Citations Per Paper
19	POLAND	115,535	597,312	5.17			
20	BELGIUM	114,172	1,206,208	10.56			7

Nota: Las ventanas de publicación y de citación corresponden al mismo periodo.

En la evolución de la producción española en el período estudiado se observa una ligera tendencia creciente, aunque el mayor crecimiento se experimenta en el intervalo 2001-2005, como puede observarse en el gráfico. En la tabla podemos ver que el número de citas totales también se incrementa a lo largo del período, coincidiendo el mayor aumento con el mayor número de documentos (2001-2005). El mayor incremento de citas relativas se produce, en cambio, en los períodos 1998-2002 y 1999-2003 (ver tabla 2).

Tabla 2. Evolución de España por número de documentos, citas y citas/doc. en el período estudiado (intervalos de 5 años)

Intervalos 5-años	1996-2000	1997-2001	1998-2002	1999-2003	2000-2004	2001-2005	2002-2006
Nº Doc	101.038	107.445	113.066	119.303	124.604	133.204	139.336
Tasa de crec.Nº Doc	--	6,34	5,23	5,52	4,44	6,90	4,60
Citas	325.632	365.079	410.245	460.184	493.603	549.326	602.096
Tasa de crec. Citas	--	12,11	12,37	12,17	7,26	11,29	9,61
Citas por Doc	3,22	3,4	3,63	3,86	3,96	4,12	4,32
Tasa de crec.Citas/doc	--	5,59	6,76	6,34	2,59	4,04	4,85

I.1.1 Producción mundial por área temática en WoS

En las tablas 3a, 3b y 3c, se muestra la producción, citas recibidas y citas por documento por grandes áreas temáticas del total del mundo en el WoS. Servirá de referencia a la hora de analizar el comportamiento de España, que se muestra en las tablas 4a, 4b y 4c.

Tabla 3a. Field Rankings. Ranked by Papers

	Field	Papers	Citations	Citations Per Paper
1	CLINICAL MEDICINE	1,830,704	19,681,810	10.75
2	CHEMISTRY	1,047,521	8,785,327	8.39
3	PHYSICS	848,977	6,230,932	7.34
4	ENGINEERING	697,821	2,314,787	3.32
5	BIOLOGY & BIOCHEMISTRY	542,166	8,383,901	15.46
6	PLANT & ANIMAL SCIENCE	493,927	3,099,795	6.28
7	MATERIALS SCIENCE	375,744	1,723,371	4.59
8	SOCIAL SCIENCES, GENERAL	360,301	1,283,875	3.56
9	NEUROSCIENCE & BEHAVIOR	278,356	4,640,725	16.67
10	MOLECULAR BIOLOGY & GENETICS	249,685	6,095,032	24.41
11	GEOSCIENCES	236,818	1,837,099	7.76
12	COMPUTER SCIENCE	223,904	574,206	2.56

	Field	Papers	Citations	Citations Per Paper
13	MATHEMATICS	213,099	577,082	2.71
14	PSYCHIATRY/PSYCHOLOGY	212,442	1,810,621	8.52
15	ENVIRONMENT/ECOLOGY	211,700	1,733,411	8.19
16	AGRICULTURAL SCIENCES	159,119	827,623	5.20
17	PHARMACOLOGY & TOXICOLOGY	157,204	1,515,203	9.64
18	MICROBIOLOGY	146,149	2,063,248	14.12
19	ECONOMICS & BUSINESS	137,868	592,232	4.30
20	IMMUNOLOGY	119,827	2,339,941	19.53
21	SPACE SCIENCE	112,183	1,333,757	11.89
22	MULTIDISCIPLINARY	21,723	71,950	3.31

Tabla 3b. Field Rankings. Ranked by Citations

	Field	Papers	Citations	Citations Per Paper
1	CLINICAL MEDICINE	1,830,704	19,681,810	10.75
2	CHEMISTRY	1,047,521	8,785,327	8.39
5	BIOLOGY & BIOCHEMISTRY	542,166	8,383,901	15.46
3	PHYSICS	848,977	6,230,932	7.34
10	MOLECULAR BIOLOGY & GENETICS	249,685	6,095,032	24.41
9	NEUROSCIENCE & BEHAVIOR	278,356	4,640,725	16.67
6	PLANT & ANIMAL SCIENCE	493,927	3,099,795	6.28
20	IMMUNOLOGY	119,827	2,339,941	19.53
4	ENGINEERING	697,821	2,314,787	3.32
18	MICROBIOLOGY	146,149	2,063,248	14.12
11	GEOSCIENCES	236,818	1,837,099	7.76
14	PSYCHIATRY/PSYCHOLOGY	212,442	1,810,621	8.52
15	ENVIRONMENT/ECOLOGY	211,700	1,733,411	8.19
7	MATERIALS SCIENCE	375,744	1,723,371	4.59
17	PHARMACOLOGY & TOXICOLOGY	157,204	1,515,203	9.64
21	SPACE SCIENCE	112,183	1,333,757	11.89
8	SOCIAL SCIENCES, GENERAL	360,301	1,283,875	3.56
16	AGRICULTURAL SCIENCES	159,119	827,623	5.20
19	ECONOMICS & BUSINESS	137,868	592,232	4.30
13	MATHEMATICS	213,099	577,082	2.71
12	COMPUTER SCIENCE	223,904	574,206	2.56
22	MULTIDISCIPLINARY	21,723	71,950	3.31

Tabla 3c. Field Rankings. Ranked by Citations Per Paper

	Field	Papers	Citations	Citations Per Paper
10	MOLECULAR BIOLOGY & GENETICS	249,685	6,095,032	24.41
20	IMMUNOLOGY	119,827	2,339,941	19.53
9	NEUROSCIENCE & BEHAVIOR	278,356	4,640,725	16.67
5	BIOLOGY & BIOCHEMISTRY	542,166	8,383,901	15.46
18	MICROBIOLOGY	146,149	2,063,248	14.12
21	SPACE SCIENCE	112,183	1,333,757	11.89
1	CLINICAL MEDICINE	1,830,704	19,681,810	10.75
17	PHARMACOLOGY & TOXICOLOGY	157,204	1,515,203	9.64
14	PSYCHIATRY/PSYCHOLOGY	212,442	1,810,621	8.52
2	CHEMISTRY	1,047,521	8,785,327	8.39
15	ENVIRONMENT/ECOLOGY	211,700	1,733,411	8.19
11	GEOSCIENCES	236,818	1,837,099	7.76
3	PHYSICS	848,977	6,230,932	7.34
6	PLANT & ANIMAL SCIENCE	493,927	3,099,795	6.28
16	AGRICULTURAL SCIENCES	159,119	827,623	5.20
7	MATERIALS SCIENCE	375,744	1,723,371	4.59
19	ECONOMICS & BUSINESS	137,868	592,232	4.30
8	SOCIAL SCIENCES, GENERAL	360,301	1,283,875	3.56
4	ENGINEERING	697,821	2,314,787	3.32
22	MULTIDISCIPLINARY	21,723	71,950	3.31
13	MATHEMATICS	213,099	577,082	2.71
12	COMPUTER SCIENCE	223,904	574,206	2.56

I.1.2 Producción de España por áreas temáticas

Entre las disciplinas en las que España destaca por número de documentos, podemos mencionar Medicina Clínica (con casi 47.000), Química (40.000) seguidas de Física (26.000). En cuanto a su posición respecto al mundo, éstas se hallan en el promedio de España (posición 9-11). Si se comparan con los países de la Unión Europea, sus posiciones suben al 4-6º puesto. Las Ciencias Agrícolas, en cambio, se sitúan en quinta posición respecto al mundo (9ª por número de documentos respecto a España), seguidas de la Microbiología (6ª posición global y 14ª por número de documentos) y la Ciencia de Plantas y Animales (8ª frente al mundo y 4ª dentro de España). Las Ciencias Agrícolas, además, se sitúan en 2ª posición dentro de los países de la Unión Europea detrás tan sólo de Alemania y con mayores citas por documento que ésta (5,92). Microbiología se sitúa en cuarto lugar entre los países UE, detrás de Alemania, Inglaterra y Francia. Con 11,11 citas por documento supera a Japón (3º por número de documentos en la disciplina). En Ciencia de Plantas y Animales, España también se sitúa en 4º lugar dentro de la UE y, de nuevo, obtiene más citas por documento que Japón.

Tabla 4a. FIELD RANKINGS FOR SPAIN (Papers)

	Field	Papers	Citations	Citations Per Paper	Papers	
					Rank vs World	Rank vs EU
1	CLINICAL MEDICINE	46,918	434,774	9.27	10	6
2	CHEMISTRY	40,179	350,279	8.72	9	4
3	PHYSICS	26,080	225,182	8.63	11	5
4	PLANT & ANIMAL SCIENCE	18,305	108,594	5.93	8	4
5	ENGINEERING	16,364	63,133	3.86	13	5
6	BIOLOGY & BIOCHEMISTRY	14,700	161,766	11.00	9	5
7	MATERIALS SCIENCE	9,533	45,597	4.78	11	4
8	MATHEMATICS	9,120	23,247	2.55	10	5
9	AGRICULTURAL SCIENCES	8,940	52,941	5.92	5	2
10	NEUROSCIENCE & BEHAVIOR	7,959	100,808	12.67	9	6
11	ENVIRONMENT/ECOLOGY	7,471	55,090	7.37	8	4
12	COMPUTER SCIENCE	7,424	12,550	1.69	10	5
13	MOLECULAR BIOLOGY & GENETICS	6,539	119,448	18.27	9	6
14	MICROBIOLOGY	6,379	70,881	11.11	6	4
15	SPACE SCIENCE	5,933	72,148	12.16	8	5
16	GEOSCIENCES	5,547	36,005	6.49	13	6
17	PHARMACOLOGY & TOXICOLOGY	4,455	33,579	7.54	10	5
18	PSYCHIATRY/PSYCHOLOGY	4,240	17,458	4.12	8	5
19	ECONOMICS & BUSINESS	3,039	9,063	2.98	8	5
20	IMMUNOLOGY	3,013	41,297	13.71	12	7
21	SOCIAL SCIENCES. GENERAL	2,537	7,080	2.79	16	8
22	MULTIDISCIPLINARY	133	785	5.90	18	7
	ALL FIELDS*	254,808	2,041,705	8.01	10	5

Tabla 4b. FIELD RANKINGS FOR SPAIN (Citations)

	Field	Papers	Citations	Citations Per Paper
1	CLINICAL MEDICINE	46,918	434,774	9.27
2	CHEMISTRY	40,179	350,279	8.72
3	PHYSICS	26,080	225,182	8.63
6	BIOLOGY & BIOCHEMISTRY	14,700	161,766	11.00
13	MOLECULAR BIOLOGY & GENETICS	6,539	119,448	18.27
4	PLANT & ANIMAL SCIENCE	18,305	108,594	5.93
10	NEUROSCIENCE & BEHAVIOR	7,959	100,808	12.67
15	SPACE SCIENCE	5,933	72,148	12.16
14	MICROBIOLOGY	6,379	70,881	11.11
5	ENGINEERING	16,364	63,133	3.86

	Field	Papers	Citations	Citations Per Paper
11	ENVIRONMENT/ECOLOGY	7,471	55,090	7.37
9	AGRICULTURAL SCIENCES	8,940	52,941	5.92
7	MATERIALS SCIENCE	9,533	45,597	4.78
20	IMMUNOLOGY	3,013	41,297	13.71
16	GEOSCIENCES	5,547	36,005	6.49
17	PHARMACOLOGY & TOXICOLOGY	4,455	33,579	7.54
8	MATHEMATICS	9,120	23,247	2.55
18	PSYCHIATRY/PSYCHOLOGY	4,240	17,458	4.12
12	COMPUTER SCIENCE	7,424	12,550	1.69
19	ECONOMICS & BUSINESS	3,039	9,063	2.98
21	SOCIAL SCIENCES. GENERAL	2,537	7,080	2.79
22	MULTIDISCIPLINARY	133	785	5.90
	ALL FIELDS*	254,808	2,041,705	8.01

Si tenemos en cuenta las citas por documento, en España destacan la Biología Molecular & Genética (18,27), la Inmunología (13,71) y la Neurociencia & Comportamiento (12,67). La primera se sitúa en la posición 43 del ranking mundial y en la 18ª entre los países europeos (aunque ISI divide el Reino Unido en Inglaterra, Escocia, Irlanda del Norte y Gales). Si de entre éstos consideráramos sólo los países con más de 1.000 documentos, España pasaría a ocupar la posición 12. Lo mismo sucede con Inmunología, aunque ésta ocupa la posición 15 entre los países de la Unión Europea subiendo desde una posición 42 inicial. Por su parte, Neurociencia & Comportamiento pasa de la posición 33 global a la 16 dentro de la UE (14 si sólo consideramos los países con más de 1.000 documentos).

Si tenemos en cuenta el promedio mundial de citas por documento, España destaca en el área Multidisciplinar (con casi 3 citas más que el promedio), Física (9 citas frente a 7), Ingeniería, Ciencias Agrícolas, Química, Ciencia de Materiales y Ciencias del Espacio (todas ellas por encima del promedio mundial).

Tabla 4c. FIELD RANKINGS FOR SPAIN (Citations Per Paper)

	Field	Papers	Citations	Citations Per Paper	Relative Citations Rate
13	MOLECULAR BIOLOGY & GENETICS	6,539	119,448	18.27	0.75
20	IMMUNOLOGY	3,013	41,297	13.71	0.70
10	NEUROSCIENCE & BEHAVIOR	7,959	100,808	12.67	0.76
15	SPACE SCIENCE *	5,933	72,148	12.16	1.02
14	MICROBIOLOGY	6,379	70,881	11.11	0.08
6	BIOLOGY & BIOCHEMISTRY	14,700	161,766	11.00	0.71
1	CLINICAL MEDICINE	46,918	434,774	9.27	0.86
2	CHEMISTRY *	40,179	350,279	8.72	1.04
3	PHYSICS *	26,080	225,182	8.63	1.17
17	PHARMACOLOGY & TOXICOLOGY	4,455	33,579	7.54	0.78
11	ENVIRONMENT/ECOLOGY	7,471	55,090	7.37	0.90

	Field	Papers	Citations	Citations Per Paper	Relative Citations Rate
16	GEOSCIENCES	5,547	36,005	6.49	0.84
4	PLANT & ANIMAL SCIENCE	18,305	108,594	5.93	0.94
9	AGRICULTURAL SCIENCES*	8,940	52,941	5.92	1.14
22	MULTIDISCIPLINARY	133	785	5.90	1.78
7	MATERIALS SCIENCE	9,533	45,597	4.78	1.04
18	PSYCHIATRY/PSYCHOLOGY	4,240	17,458	4.12	0.48
5	ENGINEERING *	16,364	63,133	3.86	1.16
19	ECONOMICS & BUSINESS	3,039	9,063	2.98	0.69
21	SOCIAL SCIENCES. GENERAL	2,537	7,080	2.79	0.78
8	MATHEMATICS	9,120	23,247	2.55	0.94
12	COMPUTER SCIENCE	7,424	12,550	1.69	0.66
	ALL FIELDS*	254,808	2,041,705	8.01	

I.1.3 Ranking mundial en cuanto a la producción científica en cada área temática

Tabla 5. COUNTRY/TERRITORY RANKINGS IN CLINICAL MEDICINE (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	667,143	9,994,064	14.98
2	GERMANY	161,363	1,642,395	10.18
3	JAPAN	159,394	1,403,380	8.80
4	ENGLAND	157,646	2,047,356	12.99
5	FRANCE	106,425	1,133,130	10.65
6	ITALY	88,630	1,053,664	11.89
7	CANADA	77,857	1,151,070	14.78
8	NETHERLANDS	59,047	887,413	15.03
9	AUSTRALIA	51,986	611,193	11.76
10	SPAIN	46,918	434,774	9.27
11	SWEDEN	44,616	625,859	14.03
12	SWITZERLAND	36,718	520,846	14.19
13	TURKEY	30,959	97,902	3.16
14	BELGIUM	28,354	392,098	13.83
15	PEOPLES R CHINA	26,367	168,239	6.38
16	ISRAEL	24,768	239,712	9.68
17	AUSTRIA	24,053	256,259	10.65
18	SCOTLAND	22,576	327,500	14.51
19	FINLAND	21,898	337,702	15.42
20	TAIWAN	21,763	140,470	6.45

Tabla 6. COUNTRY/TERRITORY RANKINGS IN CHEMISTRY (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	217,791	3,028,796	13.91
2	JAPAN	117,085	993,383	8.48
3	PEOPLES R CHINA	102,047	402,036	3.94
4	GERMANY	95,815	970,492	10.13
5	FRANCE	64,121	606,563	9.46
6	RUSSIA	60,765	168,526	2.77
7	ENGLAND	57,199	634,122	11.09
8	INDIA	47,556	220,850	4.64
9	SPAIN	40,179	350,279	8.72
10	ITALY	39,141	366,694	9.37
11	CANADA	30,670	332,083	10.83
12	SOUTH KOREA	27,758	163,851	5.90
13	POLAND	25,732	130,204	5.06
14	NETHERLANDS	18,736	251,545	13.43
15	SWITZERLAND	17,198	231,755	13.48
16	AUSTRALIA	16,789	159,513	9.50
17	TAIWAN	15,910	97,729	6.14
18	BRAZIL	14,593	77,491	5.31
19	SWEDEN	14,252	165,095	11.58
20	BELGIUM	12,196	117,968	9.67

Tabla 7. COUNTRY/TERRITORY RANKINGS IN PHYSICS (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	208,695	2,483,089	11.90
2	JAPAN	113,369	814,915	7.19
3	GERMANY	100,893	995,215	9.86
4	RUSSIA	79,939	419,514	5.25
5	PEOPLES R CHINA	71,782	275,963	3.84
6	FRANCE	71,583	619,616	8.66
7	ENGLAND	53,105	519,016	9.77
8	ITALY	47,166	403,116	8.55
9	SOUTH KOREA	28,387	154,621	5.45
10	INDIA	26,627	139,841	5.25
11	SPAIN	26,080	225,182	8.63
12	POLAND	24,006	152,376	6.35
13	CANADA	23,241	211,920	9.12
14	SWITZERLAND	21,318	277,484	13.02
15	BRAZIL	18,467	102,605	5.56
16	NETHERLANDS	16,939	183,754	10.85
17	TAIWAN	15,322	74,749	4.88
18	SWEDEN	14,814	134,755	9.10

	Country/Territory	Papers	Citations	Citations Per Paper
19	AUSTRALIA	14,232	110,619	7.77
20	UKRAINE	13,864	47,651	3.44

Tabla 8. COUNTRY/TERRITORY RANKINGS IN PLANT & ANIMAL SCIENCE (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	147,636	1,216,004	8.24
2	JAPAN	36,481	213,364	5.85
3	GERMANY	34,570	258,047	7.46
4	CANADA	30,556	226,521	7.41
5	ENGLAND	29,795	300,894	10.10
6	FRANCE	26,035	197,459	7.58
7	AUSTRALIA	24,189	171,854	7.10
8	SPAIN	18,305	108,594	5.93
9	INDIA	17,590	33,842	1.92
10	BRAZIL	13,503	38,872	2.88
11	ITALY	13,491	76,120	5.64
12	PEOPLES R CHINA	13,487	44,963	3.33
13	NETHERLANDS	12,284	110,856	9.02
14	SCOTLAND	9,984	89,464	8.96
15	SWEDEN	9,287	81,754	8.80
16	POLAND	8,716	22,630	2.60
17	BELGIUM	8,103	57,990	7.16
18	SOUTH AFRICA	7,676	32,972	4.30
19	SWITZERLAND	7,653	67,663	8.84
20	NEW ZEALAND	7,497	48,400	6.46

Tabla 9. COUNTRY/TERRITORY RANKINGS IN ENGINEERING (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	190,984	885,896	4.64
2	JAPAN	63,806	193,074	3.03
3	ENGLAND	43,984	174,764	3.97
4	GERMANY	43,049	183,043	4.25
5	PEOPLES R CHINA	41,625	94,271	2.26
6	FRANCE	33,716	142,708	4.23
7	CANADA	29,604	110,857	3.74
8	ITALY	28,795	108,688	3.77
9	RUSSIA	24,974	50,024	2.00
10	SOUTH KOREA	23,069	57,026	2.47
11	TAIWAN	22,029	63,027	2.86
12	INDIA	18,838	42,389	2.25
13	SPAIN	16,364	63,133	3.86

	Country/Territory	Papers	Citations	Citations Per Paper
14	AUSTRALIA	15,360	62,407	4.06
15	NETHERLANDS	12,521	58,762	4.69
16	SINGAPORE	9,843	28,395	2.88
17	SWEDEN	9,424	45,249	4.80
18	SWITZERLAND	9,183	51,447	5.60
19	POLAND	9,145	28,413	3.11
20	TURKEY	8,269	21,638	2.62

Tabla 10. COUNTRY/TERRITORY RANKINGS IN BIOLOGY & BIOCHEMISTRY (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	202,608	4,451,980	21.97
2	JAPAN	61,733	787,060	12.75
3	GERMANY	43,728	771,259	17.64
4	ENGLAND	41,104	777,531	18.92
5	FRANCE	35,248	520,280	14.76
6	CANADA	25,481	436,512	17.13
7	ITALY	22,813	265,686	11.65
8	PEOPLES R CHINA	15,943	69,633	4.37
9	SPAIN	14,700	161,766	11.00
10	AUSTRALIA	14,165	208,767	14.74
11	SWEDEN	13,566	234,410	17.28
12	NETHERLANDS	12,262	206,111	16.81
13	RUSSIA	11,528	75,915	6.59
14	INDIA	10,761	56,444	5.25
15	SOUTH KOREA	10,660	77,239	7.25
16	SWITZERLAND	10,489	240,657	22.94
17	BRAZIL	7,852	46,631	5.94
18	POLAND	7,724	48,662	6.30
19	SCOTLAND	7,698	146,955	19.09
20	DENMARK	7,584	124,703	16.44

Tabla 11. COUNTRY/TERRITORY RANKINGS IN MATERIALS SCIENCE (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	69,502	541,181	7.79
2	JAPAN	49,811	239,306	4.80
3	PEOPLES R CHINA	46,325	125,772	2.71
4	GERMANY	32,235	174,772	5.42
5	FRANCE	20,746	117,202	5.65
6	ENGLAND	20,588	124,404	6.04
7	SOUTH KOREA	17,499	67,972	3.88
8	RUSSIA	16,866	33,095	1.96

	Country/Territory	Papers	Citations	Citations Per Paper
9	INDIA	15,030	49,961	3.32
10	CANADA	10,437	54,804	5.25
11	SPAIN	9,533	45,597	4.78
12	ITALY	9,444	46,405	4.91
13	TAIWAN	8,816	36,082	4.09
14	UKRAINE	7,004	7,608	1.09
15	AUSTRALIA	6,428	31,463	4.89
16	POLAND	6,285	15,207	2.42
17	SWEDEN	6,134	33,878	5.52
18	NETHERLANDS	4,526	33,193	7.33
19	BRAZIL	4,508	15,387	3.41
20	SINGAPORE	4,458	21,068	4.73

Tabla 12. COUNTRY/TERRITORY RANKINGS IN MATHEMATICS (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	62,892	240,986	3.83
2	FRANCE	21,469	66,897	3.12
3	GERMANY	17,835	56,797	3.18
4	PEOPLES R CHINA	16,359	30,826	1.88
5	RUSSIA	11,985	16,208	1.35
6	JAPAN	11,708	24,454	2.09
7	ITALY	11,205	30,012	2.68
8	CANADA	10,816	33,225	3.07
9	ENGLAND	10,775	42,237	3.92
10	SPAIN	9,120	23,247	2.55
11	AUSTRALIA	5,733	19,552	3.41
12	ISRAEL	4,825	15,354	3.18
13	POLAND	4,510	9,076	2.01
14	INDIA	4,229	6,300	1.49
15	SOUTH KOREA	3,905	7,298	1.87
16	NETHERLANDS	3,464	11,959	3.45
17	BRAZIL	3,217	7,077	2.20
18	BELGIUM	2,840	10,241	3.61
19	TAIWAN	2,774	6,974	2.51
20	SWEDEN	2,530	7,994	3.16

Tabla 13. COUNTRY/TERRITORY RANKINGS IN AGRICULTURAL SCIENCES (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	39,285	276,544	7.04
2	JAPAN	11,359	42,485	3.74
3	GERMANY	10,298	49,619	4.82

	Country/Territory	Papers	Citations	Citations Per Paper
4	INDIA	9,067	15,511	1.71
5	SPAIN	8,940	52,941	5.92
6	FRANCE	8,040	55,308	6.88
7	ENGLAND	7,633	62,266	8.16
8	CANADA	7,144	47,092	6.59
9	AUSTRALIA	6,726	41,328	6.14
10	ITALY	5,642	31,853	5.65
11	BRAZIL	4,755	10,700	2.25
12	NETHERLANDS	4,130	35,842	8.68
13	PEOPLES R CHINA	2,932	9,234	3.15
14	NEW ZEALAND	2,731	16,027	5.87
15	TURKEY	2,520	6,631	2.63
16	DENMARK	2,454	20,199	8.23
17	BELGIUM	2,304	14,997	6.51
18	SOUTH KOREA	2,247	7,825	3.48
19	RUSSIA	2,097	2,912	1.39
20	MEXICO	2,055	7,027	3.42

Tabla 14. COUNTRY/TERRITORY RANKINGS IN NEUROSCIENCE & BEHAVIOR (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	118,285	2,606,346	22.03
2	GERMANY	25,802	447,693	17.35
3	JAPAN	25,758	319,049	12.39
4	ENGLAND	22,847	479,211	20.97
5	CANADA	17,492	319,725	18.28
6	FRANCE	16,716	274,377	16.41
7	ITALY	16,686	213,555	12.80
8	NETHERLANDS	8,002	122,347	15.29
9	SPAIN	7,959	100,808	12.67
10	SWEDEN	7,325	128,634	17.56
11	AUSTRALIA	6,716	97,116	14.46
12	SWITZERLAND	6,054	125,454	20.72
13	BRAZIL	5,031	31,654	6.29
14	ISRAEL	3,944	66,865	16.95
15	PEOPLES R CHINA	3,629	28,116	7.75
16	BELGIUM	3,280	51,577	15.72
17	FINLAND	3,254	52,030	15.99
18	SCOTLAND	3,071	57,937	18.87
19	SOUTH KOREA	2,872	25,180	8.77
20	AUSTRIA	2,738	46,334	16.92

Tabla 15. COUNTRY/TERRITORY RANKINGS IN ENVIRONMENT/ECOLOGY (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	75,323	794,120	10.54
2	CANADA	15,882	153,365	9.66
3	ENGLAND	15,640	174,914	11.18
4	GERMANY	12,567	112,840	8.98
5	AUSTRALIA	10,016	95,148	9.50
6	FRANCE	9,523	83,991	8.82
7	JAPAN	7,966	48,483	6.09
8	SPAIN	7,471	55,090	7.37
9	PEOPLES R CHINA	7,368	28,603	3.88
10	SWEDEN	6,650	74,785	11.25
11	NETHERLANDS	6,311	71,043	11.26
12	ITALY	5,865	40,191	6.85
13	INDIA	5,029	17,008	3.38
14	SWITZERLAND	3,850	45,304	11.77
15	FINLAND	3,809	37,610	9.87
16	SCOTLAND	3,739	42,739	11.43
17	DENMARK	3,681	41,921	11.39
18	BRAZIL	3,638	21,414	5.89
19	NEW ZEALAND	3,240	29,430	9.08
20	NORWAY	3,138	31,037	9.89

Tabla 16. COUNTRY/TERRITORY RANKINGS IN COMPUTER SCIENCE (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	67,040	286,530	4.27
2	GERMANY	17,540	42,476	2.42
3	ENGLAND	14,594	46,866	3.21
4	JAPAN	14,054	27,069	1.93
5	PEOPLES R CHINA	13,429	14,554	1.08
6	FRANCE	13,055	35,391	2.71
7	ITALY	10,471	27,241	2.60
8	SOUTH KOREA	10,377	11,172	1.08
9	CANADA	9,791	27,245	2.78
10	SPAIN	7,424	12,550	1.69
11	TAIWAN	6,388	12,107	1.90
12	AUSTRALIA	5,980	15,155	2.53
13	NETHERLANDS	5,435	14,866	2.74
14	ISRAEL	3,921	16,113	4.11
15	SWITZERLAND	3,490	15,212	4.36
16	INDIA	3,297	6,009	1.82
17	SINGAPORE	3,244	6,751	2.08
18	GREECE	3,120	5,196	1.67

	Country/Territory	Papers	Citations	Citations Per Paper
19	RUSSIA	3,094	3,077	0.99
20	SWEDEN	3,000	11,979	3.99

Tabla 17. COUNTRY/TERRITORY RANKINGS IN MOLECULAR BIOLOGY & GENETICS (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	115,042	3,784,072	32.89
2	GERMANY	24,647	650,114	26.38
3	JAPAN	24,466	494,108	20.20
4	ENGLAND	22,316	694,475	31.12
5	FRANCE	18,288	455,007	24.88
6	CANADA	13,102	339,891	25.94
7	ITALY	10,758	205,741	19.12
8	NETHERLANDS	6,939	185,948	26.80
9	SPAIN	6,539	119,448	18.27
10	AUSTRALIA	6,282	139,217	22.16
11	SWITZERLAND	6,263	206,703	33.00
12	RUSSIA	6,098	35,415	5.81
13	SWEDEN	5,153	121,685	23.61
14	SCOTLAND	4,269	125,313	29.35
15	PEOPLES R CHINA	4,224	37,162	8.80
16	ISRAEL	3,500	102,804	29.37
17	BELGIUM	3,464	78,573	22.68
18	BRAZIL	3,298	23,004	6.98
19	SOUTH KOREA	2,792	26,620	9.53
20	DENMARK	2,689	65,440	24.34

Tabla 18. COUNTRY/TERRITORY RANKINGS IN MICROBIOLOGY (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	50,666	1,013,499	20.00
2	GERMANY	14,459	232,570	16.08
3	JAPAN	13,110	135,712	10.35
4	ENGLAND	11,893	211,551	17.79
5	FRANCE	11,514	181,357	15.75
6	SPAIN	6,379	70,881	11.11
7	CANADA	5,892	89,267	15.15
8	ITALY	4,828	50,835	10.53
9	NETHERLANDS	4,717	83,234	17.65
10	AUSTRALIA	4,464	66,378	14.87
11	SOUTH KOREA	4,156	22,513	5.42
12	RUSSIA	3,708	17,334	4.67
13	BRAZIL	3,402	21,042	6.19

	Country/Territory	Papers	Citations	Citations Per Paper
14	SCOTLAND	3,018	48,204	15.97
15	SWITZERLAND	2,993	57,731	19.29
16	SWEDEN	2,933	46,902	15.99
17	BELGIUM	2,802	49,151	17.54
18	INDIA	2,685	15,311	5.70
19	PEOPLES R CHINA	2,478	16,433	6.63
20	DENMARK	2,121	34,527	16.28

Tabla 19. COUNTRY/TERRITORY RANKINGS IN SPACE SCIENCE (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	51,974	864,198	16.63
2	GERMANY	15,990	237,692	14.87
3	ENGLAND	14,248	227,995	16.00
4	FRANCE	12,948	158,751	12.26
5	ITALY	10,373	139,959	13.49
6	RUSSIA	8,379	48,502	5.79
7	JAPAN	8,009	89,257	11.14
8	SPAIN	5,933	72,148	12.16
9	NETHERLANDS	5,401	89,713	16.61
10	CANADA	4,910	86,430	17.60
11	AUSTRALIA	4,506	75,199	16.69
12	PEOPLES R CHINA	4,119	21,099	5.12
13	INDIA	2,678	16,693	6.23
14	CHILE	2,603	43,495	16.71
15	POLAND	2,351	24,577	10.45
16	SWITZERLAND	2,349	33,166	14.12
17	BRAZIL	2,204	19,642	8.91
18	MEXICO	2,104	22,377	10.64
19	SCOTLAND	2,013	35,117	17.45
20	SWEDEN	1,993	26,244	13.17

Tabla 20. COUNTRY/TERRITORY RANKINGS IN GEOSCIENCES (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	80,628	932,080	11.56
2	ENGLAND	21,821	227,209	10.41
3	GERMANY	20,824	210,003	10.08
4	FRANCE	20,411	193,558	9.48
5	RUSSIA	18,048	56,053	3.11
6	CANADA	17,377	150,117	8.64
7	JAPAN	13,601	92,065	6.77
8	PEOPLES R CHINA	12,915	58,741	4.55

	Country/Territory	Papers	Citations	Citations Per Paper
9	AUSTRALIA	11,546	114,144	9.89
10	ITALY	10,190	69,612	6.83
11	INDIA	6,827	23,062	3.38
12	NETHERLANDS	5,641	58,705	10.41
13	SPAIN	5,547	36,005	6.49
14	SWITZERLAND	5,525	61,121	11.06
15	SWEDEN	4,236	40,050	9.45
16	NORWAY	3,936	34,889	8.86
17	SCOTLAND	3,539	30,839	8.71
18	NEW ZEALAND	2,888	24,120	8.35
19	BRAZIL	2,840	17,536	6.17
20	DENMARK	2,827	28,305	10.01

Tabla 21. COUNTRY/TERRITORY RANKINGS IN PHARMACOLOGY & TOXICOLOGY (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	47,593	628,701	13.21
2	JAPAN	20,106	153,397	7.63
3	GERMANY	11,979	120,738	10.08
4	ENGLAND	11,222	155,467	13.85
5	FRANCE	8,444	90,464	10.71
6	ITALY	7,715	73,722	9.56
7	CANADA	5,976	70,651	11.82
8	PEOPLES R CHINA	5,562	21,541	3.87
9	SOUTH KOREA	4,644	23,195	4.99
10	SPAIN	4,455	33,579	7.54
11	INDIA	4,328	19,400	4.48
12	NETHERLANDS	3,805	43,839	11.52
13	AUSTRALIA	3,541	36,992	10.45
14	SWEDEN	3,264	42,374	12.98
15	BRAZIL	2,894	16,464	5.69
16	SWITZERLAND	2,803	42,515	15.17
17	TAIWAN	2,659	16,720	6.29
18	BELGIUM	2,386	26,704	11.19
19	POLAND	2,298	12,270	5.34
20	TURKEY	2,021	9,679	4.79

Tabla 22. COUNTRY/TERRITORY RANKINGS IN PSYCHIATRY/PSYCHOLOGY (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	114,246	1,172,980	10.27
2	ENGLAND	21,476	213,629	9.95
3	CANADA	15,159	145,354	9.59

	Country/Territory	Papers	Citations	Citations Per Paper
4	GERMANY	14,198	93,114	6.56
5	AUSTRALIA	9,118	67,680	7.42
6	NETHERLANDS	7,806	69,523	8.91
7	FRANCE	4,989	34,039	6.82
8	SPAIN	4,240	17,458	4.12
9	JAPAN	3,937	16,846	4.28
10	ITALY	3,724	32,473	8.72
11	ISRAEL	3,721	26,764	7.19
12	SWEDEN	3,051	24,525	8.04
13	SCOTLAND	2,434	23,024	9.46
14	SWITZERLAND	2,351	14,853	6.32
15	BELGIUM	2,249	16,954	7.54
16	NEW ZEALAND	2,052	18,018	8.78
17	FINLAND	1,937	17,238	8.90
18	NORWAY	1,740	12,047	6.92
19	WALES	1,714	17,243	10.06
20	PEOPLES R CHINA	1,622	7,215	4.45

Tabla 23. COUNTRY/TERRITORY RANKINGS IN ECONOMICS & BUSINESS (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	63,013	416,686	6.61
2	ENGLAND	15,594	73,199	4.69
3	CANADA	7,410	33,652	4.54
4	GERMANY	5,212	15,152	2.91
5	AUSTRALIA	4,711	14,534	3.09
6	NETHERLANDS	4,506	19,185	4.26
7	FRANCE	4,418	17,720	4.01
8	SPAIN	3,039	9,063	2.98
9	ITALY	2,725	8,948	3.28
10	JAPAN	2,168	5,241	2.42
11	PEOPLES R CHINA	2,157	6,617	3.07
12	SWEDEN	2,096	10,070	4.80
13	BELGIUM	1,819	7,989	4.39
14	ISRAEL	1,741	9,066	5.21
15	SCOTLAND	1,689	6,590	3.90
16	SWITZERLAND	1,452	6,479	4.46
17	TAIWAN	1,352	2,848	2.11
18	SOUTH KOREA	1,316	4,670	3.55
19	DENMARK	1,290	4,706	3.65
20	NORWAY	1,132	4,046	3.57

Tabla 24. COUNTRY/TERRITORY RANKINGS IN IMMUNOLOGY (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	53,017	1,320,694	24.91
2	ENGLAND	11,040	225,429	20.42
3	JAPAN	10,384	194,854	18.76
4	GERMANY	9,929	206,320	20.78
5	FRANCE	8,491	171,250	20.17
6	ITALY	5,852	107,206	18.32
7	CANADA	5,079	100,562	19.80
8	NETHERLANDS	4,723	92,902	19.67
9	SWEDEN	4,573	66,926	14.64
10	AUSTRALIA	4,406	86,405	19.61
11	SWITZERLAND	3,829	105,486	27.55
12	SPAIN	3,013	41,297	13.71
13	BELGIUM	1,931	38,630	20.01
14	DENMARK	1,860	27,644	14.86
15	BRAZIL	1,758	16,499	9.39
16	ISRAEL	1,651	27,662	16.75
17	SCOTLAND	1,557	28,418	18.25
18	AUSTRIA	1,555	26,674	17.15
19	PEOPLES R CHINA	1,389	8,350	6.01
20	FINLAND	1,245	19,814	15.91

Tabla 25. COUNTRY/TERRITORY RANKINGS IN SOCIAL SCIENCES, GENERAL (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	182,478	836,376	4.58
2	ENGLAND	37,871	146,608	3.87
3	CANADA	18,921	71,139	3.76
4	AUSTRALIA	13,508	46,579	3.45
5	GERMANY	9,834	21,041	2.14
6	NETHERLANDS	7,680	32,287	4.20
7	FRANCE	5,035	13,109	2.60
8	SCOTLAND	4,849	19,324	3.99
9	SWEDEN	4,830	19,979	4.14
10	ISRAEL	4,205	12,051	2.87
11	PEOPLES R CHINA	3,389	7,330	2.16
12	RUSSIA	2,894	2,166	0.75
13	JAPAN	2,812	7,166	2.55
14	NEW ZEALAND	2,640	8,894	3.37
15	ITALY	2,632	9,247	3.51
16	SPAIN	2,537	7,080	2.79
17	WALES	2,498	11,539	4.62
18	NORWAY	2,392	8,755	3.66

	Country/Territory	Papers	Citations	Citations Per Paper
19	BRAZIL	2,355	4,708	2.00
20	SOUTH AFRICA	2,345	5,970	2.55

Tabla 26. COUNTRY/TERRITORY RANKINGS IN MULTIDISCIPLINARY (Papers)

	Country/Territory	Papers	Citations	Citations Per Paper
1	USA	5,163	47,391	9.18
2	RUSSIA	3,202	1,923	0.60
3	INDIA	1,964	2,316	1.18
4	PEOPLES R CHINA	1,769	4,045	2.29
5	ENGLAND	1,166	6,020	5.16
6	FRANCE	800	3,672	4.59
7	GERMANY	668	5,615	8.41
8	BYELARUS	597	171	0.29
9	JAPAN	456	3,798	8.33
10	SOUTH AFRICA	433	790	1.82
11	CANADA	402	2,613	6.50
12	AUSTRALIA	336	1,712	5.10
13	ITALY	306	2,248	7.35
14	SWITZERLAND	178	2,854	16.03
15	NETHERLANDS	175	1,560	8.91
16	ISRAEL	151	1,235	8.18
17	SWEDEN	145	1,214	8.37
18	SPAIN	133	785	5.90
19	BRAZIL	126	363	2.88
20	UKRAINE	122	40	0.33

I.2 Áreas temáticas utilizadas en los Essential Science Indicators²

Los Essential Science Indicators están clasificados en grandes áreas, cuyo contenido temático se refleja tal cual se expresa en la base de datos. Se corresponde con revistas, aunque no se especifican.

AGRICULTURAL SCIENCES

The AGRICULTURAL SCIENCES category covers journals in general agriculture, agricultural chemistry and agronomy:

- agricultural engineering
- agronomy
- tillage research
- agroforestry
- horticulture
- crop protection and science
- agrochemistry
- phytochemistry
- agricultural biochemistry
- food chemistry
- cereal chemistry
- carbohydrate and lipid research
 - food science and nutrition
 - composition, additives and contaminants
 - microbiology and technology
 - engineering and processing
 - meat and dairy science
 - nutrition science
 - nutrition and metabolism
 - nutritional biochemistry

BIOLOGY & BIOCHEMISTRY

The BIOLOGY & BIOCHEMISTRY category covers journals on a broad range of topics in biology and biochemistry:

- structure and chemistry of biological molecules
- molecular, cellular and clinical studies of the endocrine system
- regulation of cell, organ and system functions by hormones
- experimental research in general biology and biological systems
- regulation of biological functions at the whole organism level
- exploitation of living organisms or their components
- industrial microbiology
- pollution remediation
- industrial chemicals and enzymes
- biosensors
- bioelectronics
- pesticide development
- food, flavor and fragrance industry applications
- waste treatment

² Essential Science Indicators 2006. The Thomson Corporation. <http://www.in-cites.com/a-prod/esi.html> [consulta: 28 dic 2006].

CHEMISTRY

The *CHEMISTRY* category includes journals that cover a broad spectrum of topics in the chemical sciences. Miscellaneous and applied chemistry journals are also placed in this category.

- analytical chemistry
- spectroscopy
- instrumentation
- inorganic and nuclear chemistry
- organic chemistry
- physical chemistry
- polymer science
- food chemistry
- chemical methods and structures
- natural and laboratory syntheses
- isolation and analysis of clinically significant molecules
- medicinal chemistry
- chemical engineering

CLINICAL MEDICINE

The *CLINICAL MEDICINE* category covers journals dealing with a wide range of medical and biomedical topics:

- anaesthesia
- cardiovascular medicine
- dentistry
- dermatology
- general & internal medicine
- endocrinology
- environmental medicine
- gastroenterology
- gynecology
- hepatology
- hematology
- nephrology
- nuclear medicine
- obstetrics
- oncology
- ophthalmology
- otolaryngology
- pediatrics
- pharmacology
- radiology
- toxicology
- respiratory medicine
- rheumatology
- surgery
- urology

COMPUTER SCIENCE

The COMPUTER SCIENCE category includes journals on:

- computer hardware and architecture
- computer software
- software engineering and design
- computer graphics
- programming languages
- theoretical computing
- computing methodologies
- broad computing topics
- interdisciplinary computer applications
- information systems and information technology
- acquisition, processing, storage, management, and dissemination of information
- communications via various devices and systems

ENVIRONMENT/ECOLOGY

The ENVIRONMENT/ECOLOGY category covers natural history journals and interrelated disciplines on:

- pure and applied ecology
- ecological modeling and engineering
- ecotoxicology
- evolutionary ecology
- environmental contamination and toxicology
- environmental health
- environmental monitoring and management
- environmental technology
- environmental geology
- soil science and conservation
- water resources research and engineering
- climate change
- biodiversity conservation
- Natural history journals are also included here

ECONOMICS & BUSINESS

The ECONOMICS & BUSINESS category includes journals on:

- theoretical, political, agricultural, and developmental economics
- business
- finance
- management
- organizational science
- strategic planning and decision-making methods
- industrial relations and labor

ENGINEERING

The ENGINEERING category includes publications in a number of engineering disciplines:

- aerospace engineering
- mechanical engineering
- nuclear energy
- electrical and electronics engineering
- civil engineering
 - water resources and supply
 - transportation, and municipal engineering
- effects of humans on the environment
- controls to minimize environmental degradation
- artificial intelligence
- robotics and automatic control
- engineering mathematics
 - mathematical modeling
 - optimization techniques
 - statistical methods in engineering systems
- development, manufacture, and application of instruments

GEOSCIENCES

The GEOSCIENCES category includes journals that deal with all aspects of geoscience:

- geology
- geochemistry
- geophysics
- geotechnics
- economic geology
- petrochemistry
- mineralogy
- meteorology and atmospheric sciences
- hydrology
- oceanography
- petroleum geology
- volcanology
- seismology
- climatology
- paleontology
- remote sensing
- geodesy
- geological, petroleum and mining engineering

IMMUNOLOGY

The IMMUNOLOGY category incorporates journals containing:

- cellular & molecular studies in immunology
- clinical research in immunopathology
- infectious diseases
- autoimmunity and allergy
- host-pathogen interactions in infectious disease
- experimental therapeutic applications of immunomodulating agents

MATERIALS SCIENCE

The MATERIALS SCIENCE category deals with journals covering the admixtures of matter or the basic materials from which products are constructed:

- ceramics
- paper and wood products
- polymers
- textiles
- composites
- coatings & films
- biomaterials
- metals and alloys
- metallurgy
- application of chemistry to materials design and testing
- superconductors and semiconductors
- ferroelectrics
- dielectrics

MATHEMATICS

The MATHEMATICS category is comprises journals dealing with:

- pure mathematics
- applied mathematics
- statistics and probability

MICROBIOLOGY

The MICROBIOLOGY category contains journals dealing with:

- biology & biochemistry of microorganisms (bacterial, viral and parasitic)
- medical implications of the subsets of these organisms known to cause diseases
- biotechnology applications of microorganisms for basic science or clinical use

MOLECULAR BIOLOGY & GENETICS

The MOLECULAR BIOLOGY & GENETICS category covers all aspects of basic and applied genetics, and research that has specific emphasis on cellular functions in eukaryotic systems:

- biochemistry
- molecular biology
- biophysics
- pharmacology
- receptor biology
- signal transduction
- regulation of gene expression
- developmental genetics and biology
- morphogenesis
- cell-environment interactions
- molecular genetics
- mechanisms of mutagenesis
- structure, function and regulation of genetic material
- clinical genetics, patterns of inheritance, genetic causes, and screening and treatment of diseases

MULTIDISCIPLINARY

The MULTIDISCIPLINARY category includes journals of a broad or general character in the sciences and covers the spectrum of major scientific disciplines. It also includes journals devoted to a multidisciplinary approach to the study of particular regions, ecosystems or biological systems, and interdisciplinary journals designed to illuminate significant connections between fields.

NEUROSCIENCE & BEHAVIOR

The NEUROSCIENCE & BEHAVIOR category includes journals which cover:

- cellular and molecular neuroscience
- neuronal development
- basic and clinical neurology
- psychopharmacology
- biobehavioral psychology
- molecular psychology
- neuronal function underlying higher cognitive processes

PHARMACOLOGY

The PHARMACOLOGY category includes journals dealing with:

- pharmacology
- pharmaceutics
- cellular and molecular pharmacology
- drug design and metabolism
- mechanisms of drug action
- drug delivery
- natural products
- xenobiotics
- mechanisms of action for clinical therapeutics.
- toxicology
 - molecular and cellular effects of harmful substances
 - environmental toxicology
 - occupational exposure
 - clinical toxicology

PHYSICS

The PHYSICS category includes journals that contain articles from all areas of physics and the following subfields:

- mathematical physics
- particle and nuclear physics
- physics of fluids and plasmas,
- quantum physics
- theoretical physics
- applied physics
- condensed matter physics
- physics of materials
- optics and acoustics.

PLANT & ANIMAL SCIENCE

PLANT SCIENCE coverage includes general botany journals and research on:

- regional botany
- mycology
- bryology
- plant physiology
- forestry
- weed science
- plant pathology
- economic botany
- aquatic botany and toxicology
- marine ecology
- plant nutrition
- photosynthesis research
- experimental botany
- cellular and molecular biology or physiology of plant cells and plant systems

ANIMAL SCIENCE coverage includes:

- animal behavior
- animal production science
- poultry science
- wildlife research
- lab animal science
- zoology
 - primatology
 - mammalogy
 - herpetology
 - nematology
 - malacology
- entomology and pest control
- veterinary medicine
- animal health
- marine and freshwater biology
- fisheries science
- aquaculture

PSYCHIATRY/PSYCHOLOGY

The PSYCHIATRY/PSYCHOLOGY category covers journals on all areas of psychology:

- applied
- biological
- clinical
- developmental
- educational
- mathematical
- organizational
- personal
- social
- diagnosis and treatment

SOCIAL SCIENCES, GENERAL

The SOCIAL SCIENCES, GENERAL category includes journals on:

- communication
- environmental studies
- library and information sciences
- political science
- public health and administration
- rehabilitation
- social work and social policy
- sociology
- anthropology
- law
- education

SPACE SCIENCES

The SPACE SCIENCES category includes journals dealing with all areas of:

- astronomy and astrophysics
- celestial bodies
- observation and interpretation of radiation from the component parts of the universe

II Estudio de la productividad de las Universidades por departamento

A continuación se presenta un estudio de la productividad de las Universidades desglosadas por departamento según datos proporcionados por la Comunidad de Madrid.

Los datos del profesorado que se han manejado son los de catedráticos y profesores titulares de Universidad y catedráticos de Escuela Universitaria, categorías para las que se exige el título de doctor. Las Universidades estudiadas son las seis públicas con sede en Madrid (la UNED no se ha analizado por ser una Universidad nacional). Para cada Universidad se han obtenido todos sus departamentos y el número de profesores de cada uno de ellos (considerando solamente los que se citan a continuación):

Tabla II-I. Categorías de profesores analizadas desglosadas por Universidad.

Universidad	Categoría	Nº Profesores
Autónoma de Madrid (UAM)	Catedrático de Escuela Univer.	21
	Catedrático de Universidad	307
	Profesor Interino Titular Universidad	34
	Profesor Titular Universidad	797
Carlos III de Madrid (UC3M)	Catedráticos De Universidad	103
	Titulares De Universidad	274
	Titulares Univ. Interinos	57
Complutense de Madrid (UCM)	Cated. E.U. Vinculado	1
	Cated. Vinculado	44
	Catedrático	633
	Catedrático E.U.	97
	Catedrático Interino	10
	Titular De Universidad	1992
Politécnica de Madrid (UPM)	Catedrático E.U.	130
	Catedrático Universidad	356
	Titular Univers. Interino	132
	Titular Universidad	974
Rey Juan Carlos (URJC)	Catedrático de Escuela Univ.	7
	Catedrático de Universidad	58
	Titular de Universidad	291
Alcalá de Henares (UA)	Cated. Escuela Univ.	31
	Catedrático Univ.	128
	Prof. Tit. Interino Univ.	42
	Prof. Titular Univ.	385

Se ha establecido una correspondencia entre los nombres de los departamentos de cada Universidad con los de las tablas utilizadas para mostrar la producción científica. Posteriormente, se han relacionado los documentos de cada departamento en cada base de datos con los profesores, para obtener la productividad media. Para cada Universidad se muestran las tablas de producción y productividad por departamento, de producción por departamentos identificados sólo en parte (no se sabe la sede) y por centros en los que no se especifica el departamento. En este último caso se han incluido también los centros mixtos CSIC-Universidad y los hospitales adscritos o con convenio de colaboración (siempre que en la dirección figure la de la Universidad correspondiente).