

## 台灣高引用論文的表現 (Essential Science Indicators)

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### 方法

根據美國賓州費城科學資訊機構 (Institute of Science Information, 簡稱 ISI), 所定義的《基本科學指標》(Essential Science Indicators, 簡稱 ESI), 包括 22 個學門, 農業科學 (Agricultural Sciences)、生物與生化 (Biology & Biochemistry)、化學 (Chemistry)、臨床醫學 (Clinical Medicine)、電腦科學 (Computer Science)、經濟與商業 (Economics & Business)、工程 (Engineering)、環境/生態學 (Environment/Ecology)、一般社會科學 (General Social Sciences)、地球科學 (Geosciences)、免疫學 (Immunology)、材料科學 (Materials Sciences)、數學 (Mathematics)、微生物學 (Microbiology)、分子生物與遺傳學 (Molecular Biology & Genetics)、跨領域科學 (Multidisciplinary)、神經科學與行為 (Neuroscience & Behavior)、藥理學與毒物學 (Pharmacology & Toxicology)、物理學 (Physics)、植物與動物科學 (Plant & Animal Science)、精神病學/心理學 (Psychology/Psychiatry)、以及太空科學 (Space Science), 依學門進行統計各學門被引次數世界前 1% 的文章。

### 資料來源

只考慮 1998 至 2007 年被列入 Essential Science Indicators 的文章

2008 年一月初收集

台灣共 624 篇文章被列入 Essential Science Indicators 包括 1998 至 2007 的文章, 其中台灣獨立完成的有 315 篇, 國際合作 309 篇。

### 國際合作之分佈

國家	文章總數 (%)	排名 (%)	第一作者排名 (%)	通訊作者排名 (%)
USA	232 (37)	1 (75)	1 (21)	1 (21)
Japan	88 (14)	2 (28)	2 (2.7)	2 (2.8)
Germany	76 (12)	3 (25)	4 (1.4)	4 (1.3)
China	75 (12)	4 (24)	6 (1.1)	6 (1.1)
South Korea	68 (11)	5 (22)	14 (0.32)	13 (0.32)
Russia	60 (10)	6 (19)	11 (0.48)	13 (0.32)
France	58 (9.3)	7 (19)	8 (0.8)	9 (0.81)
UK	56 (9)	8 (18)	3 (2.4)	3 (2.4)
Canada	53 (8.5)	9 (17)	8 (0.8)	7 (1)
Australia	53 (8.5)	9 (17)	14 (0.32)	13 (0.32)
India	50 (8)	11 (16)	18 (0.16)	23 (0)
Switzerland	42 (6.7)	12 (14)	14 (0.32)	13 (0.32)
Sweden	38 (6.1)	13 (12)	14 (0.32)	13 (0.32)
Poland	36 (5.8)	14 (12)	19 (0.16)	19 (0.16)
Brazil	35 (5.6)	15 (11)	24 (0)	24 (0)
Hungary	30 (4.8)	16 (9.7)	25 (0)	24 (0)

Italy	29 (4.6)	17 (9.4)	11 (0.48)	11 (0.49)
Israel	29 (4.6)	17 (9.4)	14 (0)	24 (0)
Spain	25 (4)	19 (8.1)	8 (0.8)	9 (0.81)

#### 國內機構分佈

機構	論文總數(%)	獨力完成 排名(%)	機構間合作 排名(%)	第一作者 排名(%)	通訊作者 排名(%)
Natl Taiwan Univ	158 (25)	1 (5.8)	1 (75)	1 (11.7)	1 (11)
Acad Sinica	113 (18)	6 (2)	2 (59)	3 (6.3)	4 (6.2)
Natl Tsing Hua Univ	68 (11)	3 (4)	3 (28)	3 (6.3)	3 (6.3)
Natl Cheng Kung Univ	59 (9.5)	2 (4.9)	10 (21)	2 (7.1)	2 (7)
Natl Chiao Tung Univ	52 (8.3)	3 (4)	13 (19)	5 (5)	5 (4.9)
Natl Cent Univ	41 (6.6)	8 (1.6)	13 (19)	7 (1.9)	7 (1.9)
Natl Taiwan Univ Hosp	29 (4.6)	21 (0.22)	20 (16)	11 (1.1)	10 (1.5)
Natl Yang Ming Univ	19 (3)	N/A	63 (11)	73 (0.16)	N/A
Chang Gung Mem Hosp	19 (3)	21 (0.22)	71 (10)	30 (0.48)	29 (0.49)
Natl Sun Yat Sen Univ	18 (2.9)	8 (1.6)	123 (6.3)	6 (2.2)	6 (2.3)
Natl Chung Cheng Univ	18 (2.9)	5 (2.2)	156 (4.5)	8 (1.8)	8 (1.8)
Chang Gung Univ	17 (2.7)	13 (0.45)	96 (8.5)	20 (0.64)	19 (0.65)
Natl Chung Hsing Univ	15 (2.4)	7 (1.8)	169 (4)	10 (1.3)	10 (1.5)
Natl Taiwan Normal Univ	13 (2.1)	13 (0.45)	123 (6.3)	15 (0.8)	14 (0.81)
Natl Kaohsiung Normal Univ	11 (1.8)	21 (0.22)	131 (5.7)	73 (0.16)	72 (0.16)
Natl Lien Ho Inst Technol	10 (1.6)	13 (0.45)	156 (4.5)	46 (0.32)	44 (0.32)
Natl Cheng Kung Univ Hosp	10 (1.6)	N/A	131 (5.7)	73 (0.16)	44 (0.32)
Ind Technol Res Inst	10 (1.6)	21 (0.22)	140 (5.1)	20 (0.64)	19 (0.65)
China Med Univ	4 (0.64)	N/A	223 (2.3)	30 (0.48)	29 (0.49)

#### 學門表現分佈

學門	文章數(%)
Electrical & Electronic Engineering	90 (14)
Multidisciplinary Materials Science	62 (9.9)
Multidisciplinary Physics	56 (9)
Physical Chemistry	54 (8.7)
Applied Physics	37 (5.9)
Multidisciplinary Chemistry	30 (4.8)
Artificial Intelligence Computer Science	30 (4.8)
Multidisciplinary Sciences	29 (4.6)
Particles & Fields Physics	29 (4.6)

General & Internal Medicine	27 (4.3)
Instruments & Instrumentation	25 (4)
Oceanography	23 (3.7)
Electrochemistry	21 (3.4)
Oncology	21 (3.4)
Meteorology & Atmospheric Sciences	20 (3.2)
Multidisciplinary Geosciences	20 (3.2)
Analytical Chemistry	18 (2.9)
Astronomy & Astrophysics	17 (2.7)
Gastroenterology & Hepatology	17 (2.7)
Environmental Sciences	15 (2.4)
Biochemistry & Molecular Biology	15 (2.4)
Plant Sciences	14 (2.2)
Energy & Fuels	14 (2.2)
Food Science & Technology	13 (2.1)
Condensed Matter Physics	13 (2.1)
Nanoscience & Nanotechnology	13 (2.1)
Biomedical Engineering	11 (1.8)
Biomaterials Materials Science	10 (1.6)
Civil Engineering	10 (1.6)
Applied Mathematics	10 (1.6)
Telecommunications	10 (1.6)
Environmental Engineering	10 (1.6)

#### 期刊分佈

期刊	文章數	%	IF
Physical Review Letters	48	7.7	7.072
Chemistry of Materials	21	3.4	5.104
New England Journal of Medicine	19	3.0	51.296
Terrestrial Atmospheric and Oceanic Sciences	19	3.0	0.856
Physical Review D	15	2.4	4.896
Science	14	2.2	30.028
IEEE Electron Device Letters	13	2.1	2.716
Advanced Materials	13	2.1	7.896
Nature	10	1.6	26.681
Journal of Power Sources	10	1.6	3.521
Applied Physics Letters	10	1.6	3.977
Biomaterials	9	1.4	5.196
Journal of the American Chemical Society	9	1.4	7.696
Gastroenterology	8	1.3	12.457

Sensors and Actuators B-Chemical	8	1.3	2.331
IEEE Transactions on Microwave Theory and Techniques	8	1.3	2.027
IEEE Transactions on Antennas and Propagation	7	1.1	1.48
Nuclear Instruments & Methods in Physics Research Section A-Accelerators Spectrometers Detectors and Associated Equipment	7	1.1	1.185
Journal of Hazardous Materials	6	1.0	1.855
Advanced Functional Materials	6	1.0	6.779
Physics Letters B	6	1.0	5.043
IEEE Transactions on Fuzzy Systems	6	1.0	1.803
Journal of Agricultural and Food Chemistry	6	1.0	2.322
IEEE Transactions on Neural Networks	5	0.80	2.62
Journal of the National Cancer Institute	5	0.80	15.271
Proceedings of the National Academy of Sciences of the United States of America	5	0.80	9.643
Circulation	5	0.80	10.94
Macromolecules	5	0.80	4.277
Cmes-Computer Modeling in Engineering & Sciences	5	0.80	2.038
Plant Cell	5	0.80	9.868

IF: 影響因子

作者分佈

作者	通訊作者	第一作者	ESI 論文
筆者 (不曾拿過國科會計畫)	6	10	10
Chang, SJ, Natl Cheng Kung Univ	5	5	8
Wong, KL, Natl Sun Yat Sen Univ	4	4	5
Wu, JJ, Natl Cheng Kung Univ	4	4	5
Wu, CC, Natl Taiwan Univ	4	2	9
Shu, CF, Natl Chiao Tung Univ	4	1	10
Wei, KH, Natl Chiao Tung Univ	4	0	4
Chi, Y, Natl Tsing Hua Univ	4	0	9
Chen, CC, Natl Taiwan Normal Univ	3	6	7
Chen, CT, Acad Sinica	3	6	11
Ho, YS, Taipei Med Univ	3	5	5
Liu, CS, Natl Taiwan Ocean Univ	3	5	14
Liaw, YF, Chang Gung Univ	3	4	9
Hu, CC, Natl Chung Cheng Univ	3	3	3
Keum, YY, Acad Sinica	3	3	3
Chung, SL, Natl Taiwan Univ	3	3	5
Kuo, JT, Natl Chiao Tung Univ	3	3	3
Lin, JK, Natl Taiwan Univ	3	2	5
Teng, HS, Natl Cheng Kung Univ	3	0	3
Sung, HW, Natl Tsing Hua Univ	3	0	3