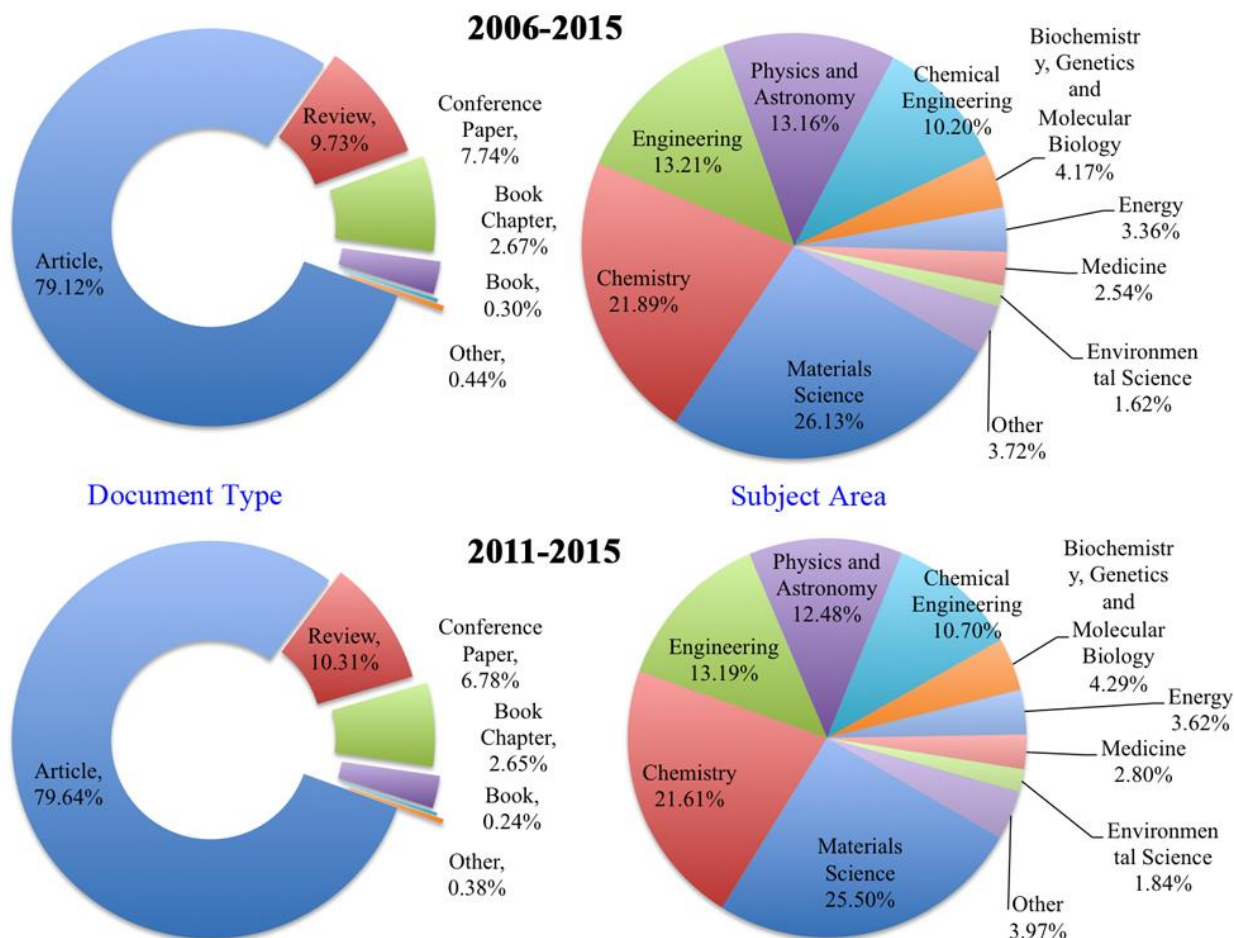


# Research progress of “Nanomaterials” in ten years

Dear Reader,

After starting to compile one of the growing subject areas of “Energy” under Advanced Materials research in the last issue, we have extracted the data in accordance to cover “Nanomaterials” for the current issue. Herein, we collected the data for last ten years and separated into 1) beginning of five years and 2) latter five years. The comparative research progress of “Nanomaterials” has been achieved at two time intervals through last ten years. In this respect, we discuss the variations in the document types and subject area (**Fig. 1**) meanwhile we also present the variation in the ranking of top-ten countries working in the field (**Table 1**). As seen in **Fig. 1**, the percentages of research articles and reviews increased while those of conference papers, book chapters and books decreased, which indicated that the researcher has mainly focused on publishing results as soon as possible and the massive data production forced them to write much more review articles in order to compile

researches and update knowledge. Furthermore, we have observed that 74% of all documents have been published for last five years while publishing 2.8, 3.5, 1.8, 2.7 and 1.3 folds of the results as article, review, conference paper, book chapter and book, respectively. In addition, the figure implied that the authors’ interest have shifted from fundamental to applied researches due to the fact that the percentages of chemistry, engineering, physics and astronomy decreased while chemical engineering, biochemistry and molecular biology, energy, medicine and environmental science significantly increased. The country ranking for “nanomaterials” and “advanced materials” field has varied through last ten years. South Korea and India jump up in the world ranking list as one and two-step up, Japan felt three-step down. We have also extracted the numbers of citations and h-indexes for top-ten countries (**Table 2**). The citations and h-indexes are almost parallel to the amount of the data produced by each country. But, there are significant variations in cases of India and



**Fig. 1.** Document type and subject area variation through the periods of 2006-2015 and 2011-2015.\*

\*All data were collected from Scopus on July 14, 2015.

Australia, which emphasized the impact and popularity of the data published. Finally, we have collected and presented the data for top-ten affiliations and top-ten authors for each country in respect to the data searched as “nanomaterials” under “advanced materials” in all-fields for 2011-2015.

**Table 1.** Ranking variation of top-ten countries from 2006-2010 to 2011-2015 in respect to the data collected as “Nanomaterials” under “Advanced Materials” in all fields.\*

Rank	2006-2010			2011-2015	
	Country	# Docs	Variation	Country	# Docs
1.	China	4465	→	China	15549
2.	USA	3527	→	USA	7598
3.	Japan	1160	↘	S. Korea	3340
4.	S. Korea	1122	↗	India	3316
5.	Germany	1034	→	Germany	2205
6.	India	839	↗	Japan	2142
7.	France	671	→	France	1511
8.	UK	603	→	UK	1497
9.	Australia	506	→	Australia	1369
10.	Spain	435	→	Spain	1231

\*All data were collected from Scopus on July 14, 2015.

**Table 1.** Ranking of top-ten countries with citations and h-indexes for 2011-2015 in respect to the data collected as “Nanomaterials” under “Advanced Materials” in all fields.\*

Rank	Country	# Docs	Citation	h-index
1.	China	15549	191482	145
2.	United States	7598	128565	140
3.	South Korea	3340	37778	74
4.	India	3316	21690	51
5.	Germany	2205	29879	72
6.	Japan	2142	24668	65
7.	France	1511	17420	59
8.	United Kingdom	1497	24018	66
9.	Australia	1369	23296	72
10.	Spain	1231	13462	51

\*All data were collected from Scopus on July 14, 2015.

Until meeting at next editorial in which we would compile the recent advances in another subject area, we wish good health and success to you all in your research target.

With best wishes,

**Table 2.** Top-ten authors in top-ten countries in respect to the data collected as “Nanomaterials” under “Advanced Materials” in all fields.\*

	Author	# Docs	Author	# Docs
China	Yu, S.H.	112	Ariga, K.	91
	Zhao, Y.	78	Hill, J.P.	65
	Qu, X.	60	Yamauchi, Y.	48
	Li, W.	58	Golberg, D.	46
	He, J.	57	Bando, Y.	39
	Liu, Z.	57	Fukuzumi, S.	36
	Ding, B.	54	Ji, Q.	28
	Jiang, X.	53	Shrestha, L.K.	21
	Yu, J.	52	Ohkubo, K.	20
	Ren, J.	50	Ye, J.	18
USA	Gogotsi, Y.	43	Sanchez, C.	29
	Cao, G.	39	Bianco, A.	25
	Wang, Z.L.	38	Boissiere, C.	19
	Dai, L.	36	Samori, P.	18
	Yager, K.G.	34	Guitard, F.	18
	Ajayan, P.M.	33	Darmanin, T.	18
	Rogers, J.A.	32	Walcarius, A.	16
	Seal, S.	31	Menard-Moyon, C.	14
	Tsukruk, V.V.	27	Boukherroub, R.	13
	Su, D.	27	Astruc, D.	13
South Korea	Jang, J.	61	Ulijn, R.V.	30
	Kim, S.O.	43	Kostarelos, K.	20
	Shon, I.J.	37	Armes, S.P.	18
	Kim, S.J.	34	Scott, J.F.	18
	Hyeon, T.	29	Stevens, M.M.	14
	Park, C.R.	28	Bruce, P.G.	13
	Fukuzumi, S.	27	Houlton, A.	13
	Kang, Y.C.	27	Manners, I.	13
	Oh, W.C.	24	Horrocks, B.R.	12
	Cho, J.	23	Shaffer, M.S.P.	11
India	Anandan, S.	39	Wang, L.	63
	Nair, S.V.	22	Qiao, S.Z.	51
	Acharya, S.	20	Lu, G.Q.	49
	Vijaya, J.J.	20	Ostrikov, K.	36
	Kennedy, L.J.	19	Liu, H.K.	35
	Mangalaraj, D.	19	Amal, R.	32
	Katiyar, R.S.	18	Zou, J.	31
	Patil, P.S.	18	Wang, G.	27
	Yadav, B.C.	17	Zhao, H.	27
	Rana, R.K.	17	Yu, C.	26
Germany	Mullen, K.	37	Ruiz-Hitzky, E.	28
	Feng, X.	37	Liz-Marzan, L.M.	26
	Schmuki, P.	32	Aranda, P.	24
	Landsiedel, R.	27	Darder, M.	18
	Landfester, K.	27	Diaz, F.	17
	Hahn, H.	26	De La Fuente, J.M.	17
	Wohlleben, W.	23	Merkoci, A.	16
	Schmidt, O.G.	21	Vallet-Regi, M.	14
	Eychmuller, A.	21	Fernandez-Garcia, M.	13
	Parak, W.J.	20	Carvajal, J.J.	13

\*All data were collected from Scopus on July 14, 2015.



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Associate Editor,  
Advanced Materials Letters

**Table 3.** Top-ten affiliations in top-ten countries in respect to the data collected as “Nanomaterials” under “Advanced Materials” in all fields.\*

	<b>Affiliation</b>	<b># Docs</b>	<b>Affiliation</b>	<b># Docs</b>
<b>China</b>	Chinese Academy of Sciences	1071	National Institute for Materials Science Tsukuba	464
	Jilin University	557	Japan Science and Technology Agency	272
	Tsinghua University	553	National Institute of Advanced Industrial Science and Technology	172
	Changchun Institute of Applied Chemistry Chinese Academy of Sciences	510	Osaka University	164
	University of Science and Technology of China	427	Tohoku University	160
	Nanjing University	411	University of Tokyo	139
	Fudan University	410	Kyoto University	130
	Soochow University	375	Tokyo Institute of Technology	107
	Shanghai Jiaotong University	363	Waseda University	106
Graduate University of Chinese Academy of Sciences	317	Kyushu University	105	
<b>USA</b>	Brookhaven National Laboratory	283	CNRS Centre National de la Recherche Scientifique	199
	Massachusetts Institute of Technology	232	Universite Pierre et Marie Curie	128
	Georgia Institute of Technology	209	Universite de Strasbourg	93
	Northwestern University	202	Universite de Bordeaux	81
	University of Texas at Austin	165	Universite Montpellier 2 Sciences et Techniques	68
	University of Illinois at Urbana-Champaign	149	Universite de Toulouse	67
	Rice University	144	Universite Paris-Sud XI	59
	Lawrence Berkeley National Laboratory	143	Universite Claude Bernard Lyon1	47
	Argonne National Laboratory	134	Universite de Nantes	44
North Carolina State University	121	Universite Paris 7- Denis Diderot	42	
<b>South Korea</b>	Seoul National University	410	University of Cambridge	175
	Korea Advanced Institute of Science & Technology	347	University College London	103
	Sungkyunkwan University	226	Imperial College London	98
	Korea University	224	University of Manchester	86
	Pohang University of Science and Technology	216	University of Oxford	80
	Korea Institute of Science and Technology	208	University of Bristol	69
	Chonbuk National University	204	University of Strathclyde	61
	Hanyang University	200	University of Nottingham	52
	Yonsei University	173	University of Liverpool	52
Ulsan National Institute of Science and Technology	171	University of Southampton	49	
<b>India</b>	Indian Association for the Cultivation of Science	142	University of Queensland	302
	Indian Institute of Science	130	University of New South Wales UNSW Australia	149
	Bhabha Atomic Research Centre	94	University of Wollongong	135
	National Physical Laboratory India	87	Commonwealth Scientific and Industrial Research Organization	129
	National Chemical Laboratory India	82	University of Sydney	117
	Jawaharlal Nehru Centre for Advanced Scientific Research	79	Monash University	110
	Central Electrochemical Research Institute India	71	University of Melbourne	92
	Indian Institute of Technology, Madras	71	Deakin University	85
	Vellore Institute of Technology	69	Royal Melbourne Institute of Technology University	67
Indian Institute of Chemical Technology	66	University of South Australia	64	
<b>Germany</b>	Max Planck Institute for Polymer Research	120	CSIC - Instituto de Ciencia de Materiales de Madrid ICMM	81
	Technische Universitat Dresden	109	Universidad Autonoma de Madrid	77
	Karlsruhe Institute of Technology	109	Universidad de Zaragoza	72
	Friedrich-Alexander-Universität Erlangen-Nürnberg	106	CIBER Bioingenieria, Biomateriales y Nanomedicina	70
	Max Planck Institut für Kolloid Und Grenzflächenforschung Potsdam	92	Institucio Catalana de Recerca I Estudis Avancats	54
	Technische Universitat Darmstadt	87	Universidad Autonoma de Barcelona	53
	Westfälische Wilhelms-Universität Munster	75	Universidad Complutense de Madrid	52
	Karlsruhe Institute of Technology, Campus North	71	CSIC - Instituto de Ciencia y Tecnologia de Polimeros ICTP	48
	Universität Ulm	61	CSIC - Instituto de Ciencia de Materiales de Barcelona ICMAB	47
Johannes Gutenberg Universität Mainz	59	Universität de Barcelona	45	

\*All data were collected from Scopus on July 14, 2015.