

Table SPBS-26

## S&amp;E articles in materials science, whole count, by region, country, or economy: 1996–2020

(Number)

Region, country, or economy	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
World	28,811	32,500	30,111	28,745	31,267	38,450	36,767	38,769	44,026	50,409	52,155	56,380	58,438	58,176	59,500	62,230	62,728	65,287	70,985	72,244	75,382	78,413	84,282	92,575	96,200
North America	8,569	8,970	8,008	7,235	7,438	7,624	7,588	7,991	8,084	9,468	9,446	9,322	9,523	8,749	9,374	9,193	9,235	9,652	9,599	9,779	9,715	10,148	10,847	10,998	10,543
Canada	709	723	659	573	585	641	605	707	854	1,038	1,031	1,164	1,235	1,215	1,149	1,326	1,298	1,503	1,307	1,392	1,351	1,375	1,466	1,561	1,616
Greenland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mexico	135	144	147	179	158	215	214	272	254	262	333	343	361	378	559	405	552	511	533	465	487	511	544	655	585
United States	7,799	8,182	7,288	6,558	6,772	6,860	6,879	7,174	7,128	8,366	8,260	8,012	8,137	7,332	7,868	7,655	7,579	7,845	7,986	8,111	8,102	8,525	9,093	9,045	8,597
Central America and Caribbean	32	41	38	49	56	55	58	66	47	70	53	55	72	79	82	50	79	67	66	67	69	46	62	87	65
Antigua and Barbuda	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bahamas, The	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barbados	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	2	0	1	1	1
Belize	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Costa Rica	0	2	2	0	2	1	0	2	2	1	1	6	0	2	1	1	1	4	1	4	7	5	4	7	7
Cuba	13	16	23	27	21	26	25	29	20	31	19	16	27	38	27	15	27	22	12	32	36	19	27	28	25
Dominica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Dominican Republic	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	5	4	3	2	4	3	3	9	6
El Salvador	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0	0	0
Grenada	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Guatemala	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	1	0	1
Haiti	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0
Honduras	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4
Jamaica	1	1	0	0	0	0	1	0	0	3	1	1	4	2	0	2	3	0	0	0	2	4	7	6	4
Nicaragua	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	1	0	0	1	0	0	0
Panama	0	2	0	1	1	0	0	1	1	0	0	3	0	0	1	0	4	0	0	0	1	0	1	8	3
Puerto Rico	13	19	13	15	31	26	24	33	19	31	30	26	39	30	46	28	37	35	43	28	12	12	16	19	8
Saint Kitts and Nevis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Saint Lucia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Saint Vincent and the Grenadines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trinidad and Tobago	5	1	0	5	2	2	7	3	5	4	0	2	1	2	4	2	3	0	3	0	4	1	5	7	5
South America	325	401	431	562	504	682	649	1,075	690	908	999	999	1,327	1,199	1,933	1,176	1,757	1,470	2,054	1,818	1,911	2,111	2,140	2,498	2,477
Argentina	100	118	114	122	123	118	129	126	131	139	157	134	209	176	202	169	212	169	230	198	219	192	337	219	220
Bolivia	0	1	1	1	0	2	3	1	2	0	0	1	1	0	0	1	0	3	1	2	2	1	3	3	1

Table SPBS-26

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Brazil	161	203	250	347	309	459	447	841	492	668	761	733	990	850	1,540	818	1,337	1,062	1,534	1,429	1,439	1,675	1,487	1,907	1,850
Chile	25	31	20	32	25	29	32	48	36	45	36	43	54	65	61	47	67	54	70	69	99	101	116	156	176
Colombia	6	12	6	14	11	16	15	27	16	22	25	37	65	94	115	99	126	168	168	120	157	136	217	191	214
Ecuador	0	0	0	1	4	8	1	4	3	2	0	3	0	2	0	2	1	1	13	12	17	18	22	43	43
Guyana	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paraguay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	4	3
Peru	5	2	4	5	1	3	2	8	5	6	6	9	5	4	10	4	10	8	13	16	19	17	12	29	43
Suriname	0	0	0	0	0	0	0	0	0	0	0	5	0	0	1	0	0	3	0	0	0	0	0	1	0
Uruguay	2	0	3	1	4	4	1	5	0	7	2	4	4	2	3	7	7	6	9	13	19	7	17	23	16
Venezuela	33	38	39	48	36	52	34	46	22	39	42	57	36	46	33	67	44	44	72	27	23	29	25	22	24
Europe	11,478	13,855	12,503	11,061	12,114	15,578	14,346	14,800	16,485	16,083	14,913	15,961	17,496	17,029	15,998	17,038	18,193	18,503	20,618	20,911	22,471	22,016	23,885	26,693	27,272
EU-27 and UK <sup>a</sup>	7,829	9,904	8,988	8,008	9,132	11,315	9,790	10,742	12,054	11,982	11,995	12,774	14,059	13,442	12,627	13,226	14,228	14,557	16,293	16,454	16,940	16,606	17,600	18,950	19,905
UK	1,636	1,838	1,594	1,502	1,750	1,683	1,601	1,718	1,855	1,729	1,819	1,766	1,864	2,019	1,808	1,928	2,040	2,095	2,287	2,461	2,420	2,664	2,670	2,900	3,032
EU-27 <sup>b</sup>	6,385	8,303	7,599	6,713	7,616	9,853	8,397	9,320	10,513	10,585	10,533	11,358	12,580	11,821	11,203	11,678	12,624	12,934	14,515	14,558	15,086	14,552	15,588	16,789	17,655
Austria	172	241	178	160	209	231	253	289	319	377	387	407	491	375	406	400	393	387	466	590	552	597	579	639	604
Belgium	157	236	217	199	208	315	236	259	329	296	342	420	420	419	387	380	469	409	466	483	476	464	526	537	593
Bulgaria	89	101	99	77	54	80	71	72	88	100	73	120	83	130	81	119	127	157	133	132	135	118	178	136	209
Croatia	53	54	48	42	43	38	58	54	75	64	53	74	127	100	98	106	132	138	130	93	130	105	129	130	142
Cyprus	1	0	0	0	2	1	1	0	3	2	9	4	10	17	6	6	8	14	9	9	12	11	13	19	27
Czechia	171	235	180	163	165	269	212	234	317	386	285	473	662	560	603	629	860	868	1,231	1,274	1,487	1,213	1,366	1,327	1,311
Denmark	85	139	130	106	130	128	116	113	161	169	150	192	199	225	179	196	220	275	242	248	213	233	234	284	282
Estonia	11	20	14	11	13	20	16	18	24	29	40	46	63	69	82	89	89	77	76	56	80	57	65	107	109
Finland	74	138	117	100	128	272	191	196	275	164	219	182	189	251	200	216	207	244	251	236	260	265	340	346	368
France	1,297	1,805	1,678	1,413	1,494	1,871	1,451	1,669	1,878	1,904	1,948	1,958	2,359	2,403	2,168	2,156	2,301	2,314	2,347	2,405	2,215	2,228	2,259	2,390	2,473
Germany	2,284	2,892	2,488	2,267	2,684	3,250	3,068	3,563	3,574	3,662	3,757	3,911	3,928	3,209	2,941	3,075	3,077	3,110	3,290	3,688	3,555	3,571	3,822	4,203	4,279
Greece	85	103	97	107	117	130	107	135	129	186	183	221	214	255	206	215	300	226	253	229	277	210	322	272	271
Hungary	111	124	275	90	136	138	112	187	169	238	158	239	232	149	248	176	192	292	208	221	181	218	190	225	267
Ireland	76	50	68	37	47	82	69	84	115	93	74	100	97	88	102	101	138	124	120	104	134	131	145	172	193
Italy	516	621	609	514	623	792	579	679	826	714	742	952	1,070	1,079	1,018	1,054	1,085	1,193	1,354	1,448	1,492	1,681	1,809	2,028	1,797
Latvia	32	56	40	43	41	37	48	46	54	39	39	43	55	39	35	70	75	72	103	60	70	130	148	101	118
Lithuania	20	19	22	53	38	46	70	54	67	76	75	49	71	67	53	71	52	58	74	73	65	74	87	118	168
Luxembourg	1	2	1	2	0	0	2	1	1	6	11	11	6	15	14	27	26	32	21	25	29	29	34	39	26
Malta	0	5	2	0	1	0	0	1	1	1	6	0	2	4	8	4	2	5	5	5	4	3	12	5	9
Netherlands	290	364	306	257	340	392	309	355	386	388	399	441	430	440	391	365	413	391	374	431	430	437	393	549	513

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Poland	381	500	422	398	472	708	495	611	801	864	638	735	748	873	781	955	1,124	1,205	1,527	1,378	1,638	1,494	1,712	1,856	2,659
Portugal	77	149	127	145	176	237	302	251	415	279	550	284	506	368	443	333	399	570	439	461	531	497	516	611	664
Romania	60	155	102	118	134	183	153	141	174	179	138	257	271	288	350	382	368	355	592	481	444	414	466	480	484
Slovakia	98	129	93	105	124	151	106	156	186	207	158	228	281	240	260	355	295	341	555	522	632	574	482	473	577
Slovenia	55	74	60	84	97	138	120	107	142	138	148	233	238	202	199	252	241	216	213	192	207	180	189	215	233
Spain	380	559	613	507	523	816	646	762	934	933	878	952	1,082	1,085	1,146	1,103	1,293	1,194	1,498	1,286	1,452	1,314	1,523	1,535	1,746
Sweden	271	371	360	410	457	466	365	391	487	485	449	460	424	501	427	481	526	589	658	645	719	705	707	791	780
Other Europe	3,919	4,353	3,908	3,416	3,428	4,723	4,988	4,528	5,030	4,701	3,608	3,859	4,170	4,342	4,025	4,575	4,742	4,804	5,275	5,488	6,602	6,583	7,534	9,169	8,910
Other Europe, 2020 <sup>b</sup>	5,508	6,141	5,450	4,864	5,124	6,351	6,526	6,188	6,819	6,363	5,356	5,535	5,949	6,268	5,772	6,433	6,682	6,811	7,461	7,837	8,908	9,098	10,059	11,893	11,741
Albania	2	3	2	2	2	1	0	1	2	0	3	1	3	2	3	4	2	7	3	4	2	4	5	8	11
Andorra	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belarus	97	101	99	73	83	73	120	126	146	110	76	75	66	66	65	71	71	78	83	82	91	109	123	148	145
Bosnia and Herzegovina	3	2	2	1	1	0	4	1	9	7	5	10	7	8	9	13	21	14	14	11	20	25	28	54	72
Holy See (Vatican City)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Iceland	3	9	1	3	1	2	2	4	3	5	3	8	3	9	6	15	11	7	10	5	5	17	11	15	20
Kosovo	0	0	0	0	0	0	0	0	0	0	0	0	3	4	10	14	14	15	8	10	9	8	12	16	15
Liechtenstein	3	0	1	5	1	3	0	4	1	6	6	8	10	4	4	5	1	0	5	13	6	5	8	2	6
Moldova	10	2	4	7	6	7	12	13	7	15	6	12	16	11	14	12	7	12	11	18	6	10	10	12	5
Monaco	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0
Montenegro <sup>c</sup>	0	0	0	0	0	0	0	0	0	0	0	4	6	6	8	1	7	9	9	1	7	6	8	7	8
North Macedonia	0	2	4	2	2	7	4	5	7	4	5	9	8	6	3	12	6	5	12	8	8	14	9	15	12
Norway	136	114	105	136	131	135	127	127	143	183	201	201	173	205	203	212	279	235	322	259	289	318	324	339	419
Russia	2,306	2,525	2,400	2,000	1,917	2,806	3,167	2,728	2,717	2,555	1,668	1,714	1,976	1,979	1,933	2,201	2,271	2,229	2,492	2,783	3,766	3,749	4,604	5,748	4,803
San Marino	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	4	4
Serbia <sup>c</sup>	0	0	0	0	0	0	0	0	0	0	0	207	145	197	156	184	222	264	233	209	224	185	218	225	224
Serbia and Montenegro <sup>d</sup>	67	73	94	51	86	61	93	64	150	160	183	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switzerland	288	417	302	296	263	359	315	308	404	432	463	460	515	489	388	441	427	447	486	545	509	523	531	571	598
Turkey	178	122	102	180	162	228	327	304	626	436	513	694	713	817	812	832	910	992	1,055	1,020	1,148	1,131	1,082	1,309	1,687
Ukraine	861	1,021	833	711	820	1,100	875	902	887	869	545	543	593	616	490	662	606	623	664	691	699	647	773	938	1,130
Middle East	362	375	333	342	312	428	403	498	507	570	656	850	1,181	1,397	1,742	2,093	2,247	2,463	2,793	2,870	3,209	3,263	3,414	4,270	5,314
Armenia	12	11	4	8	5	8	18	12	12	27	15	11	17	10	14	13	13	14	10	7	9	11	12	16	29

Table SPBS-26

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Azerbaijan	10	12	8	12	5	5	11	17	8	19	20	11	12	20	38	33	22	22	25	26	34	30	28	55	106
Bahrain	2	4	3	3	0	4	4	8	8	4	6	11	8	11	11	14	12	12	19	9	15	11	17	9	26
Gaza Strip <sup>e</sup>	0	0	0	0	0	0	0	2	1	2	3	3	0	0	1	2	4	4	7	1	5	1	4	8	13
Georgia	7	6	6	6	4	6	5	10	8	10	12	12	15	11	8	8	11	8	12	6	6	5	4	5	13
Iran	35	37	32	40	40	74	95	141	217	197	292	443	742	911	1,124	1,345	1,372	1,485	1,615	1,662	1,873	1,897	1,888	2,199	2,494
Iraq	3	8	8	2	3	3	1	1	0	1	9	5	6	15	16	19	25	64	69	73	98	177	172	298	630
Israel	181	175	158	183	152	194	159	173	128	185	157	173	180	143	161	136	154	136	156	145	198	202	216	242	288
Jordan	14	14	17	14	14	19	18	16	18	20	18	21	23	22	49	48	46	44	36	41	50	57	70	89	96
Kuwait	18	24	27	11	12	14	7	12	12	8	17	25	20	27	26	36	26	37	31	34	26	36	32	55	55
Lebanon	0	1	0	2	1	4	0	4	3	3	7	17	7	13	19	21	14	22	28	30	36	28	44	53	54
Oman	4	5	8	5	4	3	11	8	7	8	12	13	25	16	20	13	20	11	24	40	30	38	32	43	66
Qatar	3	3	4	3	2	4	2	1	6	1	2	4	10	6	8	20	34	32	83	79	82	87	119	113	140
Saudi Arabia	61	63	54	47	61	76	58	84	64	65	68	81	98	153	208	329	422	499	594	625	622	575	654	927	1,231
Syria	2	2	1	1	0	2	0	1	5	4	4	4	5	5	3	7	13	3	5	6	5	13	6	19	28
United Arab Emirates	9	5	1	4	7	11	14	12	10	18	12	20	20	38	37	54	68	81	99	128	183	155	188	239	220
West Bank <sup>e</sup>	2	2	3	1	4	0	3	2	1	3	3	2	2	1	6	6	7	6	11	9	7	8	13	11	12
Yemen	1	3	1	0	1	2	1	0	1	1	3	3	0	1	7	4	5	10	11	3	9	20	13	17	41
Africa	305	364	420	352	369	546	453	573	600	578	606	667	827	1,065	1,019	1,033	1,197	1,243	1,415	1,433	1,558	1,708	1,949	2,666	3,197
Algeria	18	26	30	29	42	47	40	57	89	73	99	113	150	223	195	181	210	227	244	220	235	251	314	364	352
Angola	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	2
Benin	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	1	0	0	0	4	3
Botswana	0	0	0	0	0	1	0	0	0	0	2	0	2	0	3	3	2	0	2	4	7	12	9	38	35
Burkina Faso	0	3	2	0	0	1	1	2	2	2	4	3	0	3	3	0	0	0	0	1	1	0	0	2	5
Burundi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1
Cabo Verde	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Cameroon	1	1	0	0	0	1	0	1	4	5	4	6	9	7	4	8	3	6	10	12	14	14	17	32	46
Central African Republic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	3
Chad	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	2	2	0
Comoros	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Congo, Democratic Republic of the	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	5	3
Congo, Republic of the	0	0	0	0	0	1	0	0	0	1	0	1	0	1	0	0	1	0	2	0	0	0	0	1	0

Table SPBS-26

## S&amp;E articles in materials science, whole count, by region, country, or economy: 1996–2020

(Number)

Region, country, or economy	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Côte d'Ivoire	0	0	0	1	0	1	0	3	0	1	1	1	4	3	1	1	2	1	2	4	2	8	5	6	5
Djibouti	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Egypt	157	165	171	171	152	281	245	286	286	273	242	300	335	416	407	415	473	523	507	493	483	516	577	776	1,080
Equatorial Guinea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Eritrea	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	2	1	1
Eswatini	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	1	1
Ethiopia	0	0	0	0	0	1	2	0	0	2	0	2	2	0	0	1	1	0	15	13	20	17	34	77	117
Gabon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	2	0	0
Gambia, The	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ghana	1	3	3	0	1	1	2	2	2	2	2	0	5	7	2	4	6	9	11	8	16	7	15	27	47
Guinea	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Guinea-Bissau	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kenya	2	2	1	2	1	0	0	3	2	1	3	1	4	2	1	1	2	2	7	8	7	7	4	37	35
Lesotho	2	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	2	0
Liberia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Libya	3	1	10	2	4	1	1	3	8	3	2	7	18	10	10	3	5	15	19	13	12	10	8	9	21
Madagascar	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1	1	1	1
Malawi	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	2	0	0	0	0	2	2
Mali	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1
Mauritania	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
Mauritius	0	0	0	0	1	1	0	0	2	1	2	2	1	1	3	1	7	1	1	4	3	6	4	2	7
Morocco	34	54	113	63	78	88	49	59	72	61	40	53	64	65	62	68	82	100	99	83	102	155	179	331	429
Mozambique	0	0	1	0	0	1	0	2	0	0	1	2	0	0	0	1	1	0	0	0	0	3	0	2	7
Namibia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	5	4	1	7	2	4	7
Niger	0	0	0	0	1	0	0	1	0	2	0	0	0	0	2	0	0	0	0	0	2	0	1	0	1
Nigeria	7	12	10	18	12	13	18	22	19	22	31	29	34	64	76	49	75	75	89	114	155	170	234	413	445
Rwanda	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	1	0	1	1	0	0	2	2	0	6
São Tomé and Príncipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Senegal	3	0	0	0	1	3	0	1	0	1	5	2	1	2	1	0	3	0	7	3	3	2	5	9	5
Seychelles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sierra Leone	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
Somalia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
South Africa	61	72	57	42	46	67	69	68	53	59	84	68	96	123	135	183	212	178	248	270	256	315	376	519	482
South Sudan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0

Table SPBS-26

## S&amp;E articles in materials science, whole count, by region, country, or economy: 1996–2020

(Number)

Region, country, or economy	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Sudan	1	0	0	0	1	0	2	2	0	0	1	0	5	5	2	7	12	1	7	17	17	18	17	23	26
Tanzania	1	1	0	1	2	1	0	0	0	0	5	1	2	1	0	2	1	3	9	8	5	3	5	10	20
Togo	0	0	0	1	0	2	0	1	0	0	0	1	1	0	0	2	1	1	2	5	1	1	2	1	3
Tunisia	11	18	25	19	25	37	24	60	57	70	79	82	113	141	132	123	130	143	192	222	287	269	236	190	227
Uganda	0	0	0	0	0	1	0	1	2	1	2	3	1	0	2	0	1	0	5	2	4	3	2	8	13
Zambia	1	2	1	1	0	0	0	0	0	0	0	0	0	1	0	0	2	0	2	0	3	3	0	2	4
Zimbabwe	6	3	1	2	2	0	0	0	4	1	1	3	2	1	1	0	1	1	1	0	3	2	2	3	9
Asia	9,273	10,309	10,322	10,920	12,544	15,434	15,487	16,638	20,699	26,031	29,075	32,176	31,986	32,709	33,573	36,340	34,995	37,702	40,985	42,538	44,298	47,704	51,854	56,554	60,031
Afghanistan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	1	2	3
Bangladesh	13	14	9	11	19	11	10	10	17	15	14	28	23	34	43	38	47	55	44	41	93	94	123	204	225
Bhutan	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	5	1
Brunei	2	1	1	0	0	0	2	0	3	2	0	1	0	0	2	1	1	4	3	10	15	23	14	35	32
Burma	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	1	1	2	3	2	1	1	1	10	11
Cambodia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	1	3	2
China	2,734	3,285	3,514	3,487	4,370	6,669	6,454	7,258	10,658	15,546	17,339	19,156	19,630	20,863	21,103	23,106	22,102	24,400	27,140	28,028	29,294	31,017	33,586	35,630	37,348
India	1,217	1,114	1,063	1,239	1,327	1,382	1,447	1,619	1,651	1,729	1,847	2,192	2,468	2,476	2,701	3,001	3,119	3,510	3,647	4,422	4,392	5,984	7,960	9,459	10,793
Indonesia	12	12	9	12	22	14	12	21	23	22	20	20	24	29	32	78	73	120	121	258	399	426	566	870	1,152
Japan	4,202	4,509	4,418	4,694	4,939	5,251	5,257	5,421	5,528	5,549	5,951	6,287	5,670	5,278	5,194	5,044	4,847	4,790	4,639	4,111	4,225	4,149	4,065	4,095	4,173
Kazakhstan	18	15	11	8	14	13	27	18	21	28	10	26	19	22	28	38	33	57	80	67	108	134	191	248	296
Kyrgyzstan	6	4	2	2	1	1	0	0	1	3	1	4	5	2	0	3	1	3	1	3	3	1	3	10	11
Laos	1	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	1	0	2	1	1	2	4	5
Malaysia	14	17	28	27	38	61	67	48	89	103	163	179	209	431	585	1,106	991	932	1,394	1,475	1,848	1,724	1,399	1,939	1,763
Maldives	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Mongolia	0	0	5	2	5	1	2	4	2	5	2	1	1	2	2	10	39	80	6	6	5	26	4	9	4
Nepal	0	0	0	1	1	0	2	0	1	2	0	2	3	1	4	7	6	11	6	6	10	8	4	15	18
North Korea	0	0	0	0	1	0	0	0	0	0	0	0	2	1	2	3	12	1	1	6	11	10	11	21	7
Pakistan	22	31	18	20	23	16	18	19	15	35	32	68	85	87	137	130	222	192	229	425	278	346	506	635	866
Papua New Guinea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	2	3
Philippines	1	2	2	2	2	0	0	0	3	4	2	3	5	2	10	4	7	14	15	21	52	53	84	72	100
Singapore	133	190	192	260	314	329	364	376	323	316	376	360	367	346	423	347	351	368	379	401	489	520	518	566	681
South Korea	610	829	845	942	1,262	1,364	1,557	1,546	2,267	2,566	2,966	3,561	2,877	2,659	2,737	3,121	3,073	3,145	3,337	3,196	3,200	3,263	3,178	3,588	3,629
Sri Lanka	4	5	1	5	2	0	5	4	8	10	12	11	5	13	10	10	10	6	8	12	16	24	20	43	45
Taiwan	402	440	392	428	463	560	579	763	702	713	1,030	1,045	1,224	1,064	1,277	1,077	957	986	1,019	1,062	836	890	793	879	952
Tajikistan	10	3	1	4	3	2	11	0	2	0	0	1	0	2	0	1	3	2	2	1	3	3	4	11	11
Thailand	7	20	11	19	22	16	29	71	65	91	113	181	216	255	255	304	244	345	352	427	596	813	785	727	745

Table SPBS-26

**S&E articles in materials science, whole count, by region, country, or economy: 1996–2020**

(Number)

Region, country, or economy	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Timor-Leste	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Turkmenistan	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0
Uzbekistan	22	30	27	29	34	47	44	27	38	48	22	28	31	38	30	19	24	26	25	28	21	19	19	35	51
Vietnam	4	4	6	8	5	8	7	11	9	10	17	18	21	21	56	35	64	82	76	149	161	165	221	414	585
Australia and Oceania	436	460	520	456	481	546	603	597	722	940	882	1,015	1,010	1,023	1,240	1,176	1,439	1,418	1,551	1,543	1,546	1,810	1,710	1,947	1,919
Australia	393	412	458	404	417	483	543	534	650	871	799	907	908	931	1,159	1,071	1,285	1,302	1,441	1,407	1,403	1,703	1,565	1,793	1,784
Cook Islands	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fiji	0	0	0	0	0	0	0	0	0	1	1	4	0	1	1	3	4	0	4	3	2	5	4	7	12
Kiribati	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Marshall Islands	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Micronesia, Federated States of	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nauru	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Zealand	44	53	64	57	67	63	62	65	78	86	103	121	107	99	97	121	168	125	118	148	156	127	170	176	138
Niue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Palau	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Samoa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solomon Islands	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tonga	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tuvalu	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vanuatu	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unassigned	550	412	406	351	453	613	822	1,234	1,176	889	437	514	471	259	162	174	131	130	135	108	162	135	133	230	205

EU = European Union; UK = United Kingdom.

<sup>a</sup> The UK was a part of the EU for data purposes from 1973 to 2019.<sup>b</sup> Beginning in 2020, the UK was no longer a member of the EU.<sup>c</sup> Beginning in 2006, Serbia and Montenegro represented individual countries.<sup>d</sup> Serbia and Montenegro represented a single country for data purposes from 1992 to 2006.<sup>e</sup> West Bank and Gaza Strip are separate entities in this list but are grouped in the World Bank Lending Groups classification list. Here, the economic status of the group is applied to both individual regions.

**Note(s):**

Article counts refer to publications from selected journals and conference papers in S&E from Scopus. Articles are classified by their year of publication and are assigned to a region, country, or economy on the basis of the institutional address(es) of author(s) listed in the article. Articles are credited on a whole count basis. In whole counting, each region, country, or economy with a collaborating author on an article is credited with one count. The sum of the whole count for regions, countries, or economies does not add to the world total because of multiple counts of coauthored publications. Some publications have incomplete address information for coauthored publications in the Scopus database. The Unassigned category count is the sum of whole counts for publications that cannot be assigned to a region, country, or economy.

**Source(s):**

National Center for Science and Engineering Statistics; Science-Metrix; Elsevier, Scopus abstract and citation database, accessed May 2021.

*Science and Engineering Indicators*