

TABLE 21
Companies with domestic R&D paid for by the company and others and performed by the company in the nanotechnology focus area, by industry and company size: 2021

(Millions of U.S. dollars and number of companies)

Industry and company size	NAICS code	Domestic R&D		Nanotechnology R&D											
		Companies ^a (number)	Amount	Total		Paid for by the company				Paid for by others					
				Companies ^b (number)	Amount	Companies ^b (number)	Amount	Companies ^b (number)	Amount	Companies ^b (number)	Amount				
All industries	21-23, 31-33, 42-81	31,490	602,499	1,030	i	32,718	i	930	i	31,371	i	170	i	1,347	i
Manufacturing industries	31-33	15,620	326,060	750	i	27,805	i	710	i	27,096	i	70		709	
Food	311	890	5,266	10		24		10		23		10		1	
Beverage and tobacco products	312	190	1,247	10	i	6		10	i	6		0		0	
Textile, apparel, and leather products	313-16	310	829	10		1		10		1		0		0	
Wood products	321	150	444	0		0		0		0		0		0	
Paper	322	120	1,139	10		5	i	10		5	i	0		0	
Printing and related support activities	323	170	204	i	0	0		0		0		0		0	
Petroleum and coal products	324	110	957	0		0		0		0		0		0	
Chemicals	325	2,250	109,490	160	i	619		160	i	586		20		33	
Basic chemicals	3251	250	2,713	50	i	218		50	i	208		10		10	
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	130	1,389	i	30	r	8 - 108	i	20	r	0 - 98	i	10	i	9
Pesticide, fertilizer, and other agricultural chemicals	3253	100	1,157	20	i	0 - 98	i	20	i	0 - 98	i	0		0	
Pharmaceuticals and medicines	3254	1,210	100,220	30		292		30		281		10		12	
Soap, cleaning compound, and toilet preparations	3256	290	2,740	10		1		10		1		0		0	
Paint, coating, adhesive, and other chemicals	3255, 3259	300	1,271	50	i	1 - 101		50	i	0 - 98		10		2	
Plastics and rubber products	326	920	3,144	60	i	114		60	i	110		10		5	
Nonmetallic mineral products	327	340	1,533	20	i	11		20	i	0 - 12		10		0 - 12	
Primary metals	331	260	912	10	i	0 - 9	i	10	i	0 - 9	i	0		0	
Fabricated metal products	332	2,310	4,291	50	r	30	r	50	r	30	r	0		0	
Machinery	333	2,170	17,730	50		2,318		50		2,189		10		129	
Agricultural implement	33311	150	1,867	0		0		0		0		0		0	
Semiconductor machinery	333242	60	5,349	20	i	2,279		20	i	2,154		10		125	
Engine, turbine, and power transmission equipment	3336	80	1,374	10		1		10		1		0		0	
Other machinery	other 333	1,900	9,140	40		38		30		34		10		4	
Computer and electronic products	334	2,130	101,063	320	i	23,907	i	300	i	23,534	i	30	i	374	
Communications equipment	3342	280	12,557	20	i	47	i	20	i	47	i	0		0	
Semiconductor and other electronic components	3344	660	47,396	160	i	23,549	i	150	i	23,187	i	20	i	363	
Navigation, measuring, electromedical, and control instruments	3345	960	13,644	150	i	95 - 312		150	i	85 - 301		10		11	
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	180	3,087	20	i	50	i	20	i	49	i	10		1	i
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	190	5,301	20	i	42		20	i	37		10		5	

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Other measuring and controlling devices	other 3345	600	5,256	120	i	4 - 221	110	i	0 - 216	10		5	r	
Other computer and electronic products	other 334	240	27,465	10		0 - 216	10		0 - 216	0		0		
Electrical equipment, appliances, and components	335	580	5,494	20		16	20		16	0		0		
Transportation equipment	336	1,150	50,760	10		226	10	i	61 - 82	10		144 -	165	
Motor vehicles, bodies, trailers, and parts	3361-63	570	26,391	10		3	10		1	10		2		
Aerospace products and parts	3364	350	21,468	i	10	i	223	i	10	i	59 - 81	i	10	i
Aircraft, aircraft engine, and aircraft parts	336411-13	310	19,845	i	10	i	223	i	10	i	59 - 81	i	10	i
Guided missile, space vehicle, and related parts	336414-15, 336419	40	1,623	10	i	*	10	i	*	i	0		0	
Military armored vehicle, tank, and tank components	336992	20	21 - 25	0		0	0		0	0		0		
Other transportation	other 336	220	2,875 - 2,880	10		1	10		0 - 2	10		0 - 2		
Furniture and related products	337	230	426	0		0	0		0	0		0		
Miscellaneous	339	1,450	21,133	70	i	525 - 534	60	i	520	20	i	5 - 14		
Medical equipment and supplies	3391	820	18,438	60	i	477	60	i	471	20	i	6		
Other miscellaneous manufacturing	3399	640	2,695	10		48 - 57	10		49	i	10	0 - 9		
Nonmanufacturing industries	21-23, 42-81	15,880	276,439	290	i	4,913	i	220	i	4,276	i	100	i	638
Mining, quarrying, oil and gas extraction, and support activities	21	180	1,260 - 1,334	10		2	10		1	10		1		
Utilities	22	40	168 - 17,997	0		0	0		0	0		0		
Wholesale trade	42	1,810	1,745 - 1,855	i	10	i	2	i	10	i	2	i	0	
Electronic shopping and electronic auctions	454111-12	180	5,936 - 24,040	i	0	0	0		0	0		0		
Transportation and warehousing	48-49	80	7,208	0		0	0		0	0		0		
Information	51	3,450	147,855	20	i	3,417	i	20	i	3,417	i	0		0
Publishing	511	1,420	39,152	20	i	3,365	i	20	i	3,365	i	0		0
Newspaper, periodical, book, and directory publishers	5111	60	103	0		0	0		0	0		0		
Software publishers	5112	1,370	39,049	20	i	3,365	i	20	i	3,365	i	0		0
Telecommunications	517	170	3,835	0		0	0		0	0		0		

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Data processing, hosting, and related services	518	1,700	45,192	10	i	51	10	i	51	0		0
Other information	other 51	180	59,676	10		2	10		2	0		0
Finance and insurance	52	530	20,947	0		0	0		0	0		0
Real estate and rental and leasing	53	50	2,096	0		0	0		0	0		0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	10	5 - 8	0		0	0		0	0		0
Other real estate and rental and leasing	other 53	40	2,088 - 2,091	0		0	0		0	0		0
Professional, scientific, and technical services	54	7,050	66,496	260	i	1,458	190	i	821	100	i	637
Architectural, engineering, and related services	5413	1,430	4,560	60	i	37	50	i	31	10		6
Computer systems design and related services	5415	3,390	20,409	40	i	758	30	i	475	20	i	283
Scientific research and development services	5417	1,370	34,142	150	i	518	110	i	182	70	i	337
Research and development in nanotechnology	541713	70	228	60	i	156	50	i	127	20		29
Research and development in biotechnology (except nanobiotechnology)	541714	310	9,039	20		10	10		4	10		6
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	980	24,312	80	i	353	50	i	51	50	i	302
Research and development in the social sciences and humanities	541720	30	563	0		0	0		0	0		0
Other professional, scientific, and technical services	other 54	870	7,385	30	i	144	20	i	134	20	i	11
Health care services	621-23	590	2,060 - 2,138	10	i	34	10	i	34	0		0
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	1,980	2,564 - 3,199	0		0	0		0	0		0
All companies (number of domestic employees)	-	31,490	602,499	1,030	i	32,718	930	i	31,371	170	i	1,347
Small companies												
10-19 ^c	-	5,690	5,477	220	i	222	190	i	171	50	i	51
20-49	-	9,210	15,061	340	i	527	310	i	395	50	i	132
Medium companies												
50-99	-	5,760	14,540	150	i	228	130	i	161	30	i	67
100-249	-	5,570	24,023	140	i	384	130	i	338	30	i	46
Large companies												
250-499	-	2,050	23,932	60	i	737	60	i	669	10		68
500-999	-	1,290	27,432	40		591	40		493	10		98
1,000-4,999	-	1,350	94,615	70		5,103	60		4,784	10		319

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5,000–9,999	–	270	62,817	30	4,375 i	30	4,234 i	10	141 i		
10,000–24,999	–	210	104,607	20	9,746 i	20	9,480 i	10	266 i		
25,000 or more	–	130	229,995	10	10,805 i	10	10,646 i	10	159 i		

* = amount < \$500,000; i = more than 50% of the estimate is a combination of imputation and reweighting to account for nonresponse; r = relative standard error is more than 50%.

NAICS = 2017 North American Industry Classification System.

^a Beginning in survey year 2018, these statistics include an adjustment to the weight to account for unit nonresponse; beginning in survey year 2019, these company count estimates reflect a change in rounding methodology.

^b Beginning in survey year 2018, these statistics include an adjustment to the weight to account for unit nonresponse; beginning in survey year 2019, these company count estimates reflect a change in rounding methodology. These company count estimates also reflect an imputation process implemented for survey year 2014. This change has affected the comparability of these company count estimates with estimates published for years prior to 2014.

^c The Business Enterprise Research and Development Survey does not include companies with fewer than 10 domestic employees.

Note(s):

Detail may not add to total because of rounding. Industry classification is based on the dominant business code for domestic R&D performance, where available. For companies that did not report business codes, the classification used for sampling was assigned. Statistics are representative of companies located in the United States that performed or funded \$50,000 or more of R&D and are not comparable with estimates published for years prior to 2018. Companies could report R&D in one, more than one, or no application area. An estimate range may be displayed in place of a single estimate to avoid disclosing operations of individual companies.

Source(s):

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2021.