

TABLE 47

Higher education R&D expenditures in the physical sciences, ranked by all FY 2020 physical sciences: FYs 2017–20 and by subfield for FY 2020

(Dollars in thousands)

Institution	Rank	2017	2018	2019	2020					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
All institutions	-	5,049,994	5,232,066	5,551,490	5,667,046	780,080	1,926,772	252,193	2,434,467	273,534
Johns Hopkins U. ^a	1	189,415	243,916	323,619	390,245	96,033	25,946	4,300	232,583	31,383
California Institute of Technology	2	192,478	188,604	188,041	217,581	49,859	40,638	20,847	106,237	0
Michigan State U.	3	191,923	169,148	151,159	154,318	39	11,806	0	142,473	0
Massachusetts Institute of Technology	4	127,856	124,145	136,601	153,044	35,202	32,375	6,864	48,695	29,908
U. Arizona	5	126,361	127,847	139,315	149,138	121,908	14,511	3,434	9,230	55
U. California, Berkeley	6	143,095	130,883	130,895	141,434	66,219	36,326	63	32,085	6,741
Cornell U.	7	112,256	122,144	122,968	121,218	10,728	27,423	4,382	48,658	30,027
U. Colorado Boulder	8	74,376	84,938	107,416	115,340	28,747	9,041	0	69,967	7,585
U. Maryland ^b	9	na	na	102,720	105,718	36,409	10,389	463	46,013	12,444
U. Rochester	10	89,368	93,061	111,388	101,004	0	5,309	0	95,695	0
Harvard U.	11	84,679	84,054	94,515	100,654	16,435	33,675	0	49,146	1,398
Stanford U.	12	92,056	88,010	95,084	94,954	6,031	25,478	11,383	48,826	3,236
Princeton U.	13	70,706	82,329	88,235	94,815	24,682	25,095	3,611	40,161	1,266
Pennsylvania State U., University Park and Hershey Medical Center	14	87,175	93,913	99,485	94,201	15,788	17,696	34,436	26,281	0
U. California, San Diego	15	67,380	67,509	85,322	94,124	0	27,429	0	66,169	526
U. Wisconsin-Madison	16	71,282	73,381	75,231	83,687	5,564	31,441	0	24,984	21,698
U. Texas, Austin	17	76,290	77,735	81,357	81,380	13,187	16,470	24,874	26,463	386
Northwestern U.	18	71,743	82,409	82,072	78,168	6,604	35,130	16,418	15,418	4,598
U. Illinois, Urbana-Champaign	19	65,579	69,612	69,531	72,360	10,212	34,642	0	27,506	0
U. California, San Francisco	20	63,015	63,010	65,942	69,662	0	68,745	0	917	0
Florida State U.	21	63,307	67,753	61,706	68,454	840	23,225	2,327	41,870	192
U. Michigan, Ann Arbor	22	60,437	59,815	61,017	60,824	5,867	31,361	0	23,596	0
U. Washington, Seattle	23	56,292	54,074	58,166	60,477	11,172	24,008	1,968	19,281	4,048
U. California, Santa Barbara	24	58,251	49,160	65,929	58,534	6,419	9,166	18,605	23,427	917
U. Pennsylvania	25	46,244	55,476	60,150	58,157	1,579	21,246	13,961	21,371	0
Ohio State U.	26	37,522	39,895	46,223	57,083	6,264	28,972	840	21,007	0
Yale U.	27	61,511	63,981	62,247	56,046	6,853	21,309	0	27,884	0

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U. California, Los Angeles	28	57,004	55,568	60,067	54,697	38	19,842	0	33,263	1,554
Texas A&M U., College Station and Health Science Center	29	54,015	54,890	55,920	54,574	7,336	24,507	4,142	17,848	741
U. Chicago	30	55,752	51,285	52,656	51,122	8,611	24,631	5,185	12,688	7
U. Houston	31	30,672	32,572	43,378	50,164	118	40,835	200	8,637	374
U. Notre Dame	32	41,291	42,506	45,062	44,855	0	29,216	0	15,639	0
U. Minnesota, Twin Cities	33	38,747	39,527	45,573	43,946	1,937	22,061	0	19,948	0
Purdue U., West Lafayette	34	34,740	37,542	38,081	42,370	0	22,953	0	19,417	0
SUNY, Stony Brook U.	35	33,115	39,938	41,679	41,224	2,213	12,396	0	26,615	0
U. California, Irvine	36	39,032	37,914	40,872	40,964	0	21,988	0	18,770	206
U. North Carolina, Chapel Hill	37	33,807	35,118	37,055	39,979	613	22,546	0	10,472	6,348
Columbia U. in the City of New York	38	46,452	32,070	35,369	37,384	6,444	11,983	6,626	12,331	0
U. California, Santa Cruz	39	27,698	29,547	32,576	36,262	18,690	10,478	0	6,991	103
U. Central Florida	40	31,009	27,810	30,415	34,630	0	4,627	0	29,883	120
Georgia Institute of Technology	41	37,000	37,983	38,229	34,215	0	22,323	0	11,892	0
Rice U.	42	32,195	29,448	34,759	33,656	1,276	16,251	22	16,107	0
Indiana U., Bloomington	43	31,873	26,019	31,099	33,389	1,354	19,310	0	12,725	0
Boston U.	44	27,450	29,879	30,805	30,909	2,677	14,230	0	14,002	0
U. Utah	45	25,908	24,919	54,131	30,170	9,853	18,018	0	0	2,299
U. Hawaii, Manoa	46	24,974	23,775	27,285	29,491	18,827	2,401	0	4,021	4,242
U. Massachusetts, Amherst	47	22,383	24,443	31,623	28,757	4,838	14,992	0	8,927	0
Vanderbilt U. and Vanderbilt U. Medical Center	48	31,035	29,053	28,951	28,017	0	13,559	0	14,458	0
U. Pittsburgh, Pittsburgh	49	32,546	30,869	30,196	27,652	3,087	16,058	0	8,507	0
U. Virginia, Charlottesville	50	34,663	25,154	26,742	27,628	3,424	11,980	0	12,224	0
Florida International U.	51	13,119	18,688	24,968	27,354	0	18,412	0	8,185	757
Iowa State U.	52	27,491	42,277	40,040	27,216	0	12,374	0	14,842	0

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New York U.	53	20,631	23,915	26,098	26,698	0	13,753	0	12,945	0
U. California, Davis	54	27,092	23,212	26,589	26,495	0	13,607	0	10,195	2,693
New Mexico State U.	55	30,701	25,776	25,535	26,366	7,548	5,296	0	1,386	12,136
U. Nebraska, Lincoln	56	24,191	28,112	26,100	25,853	0	11,631	427	13,795	0
Rutgers, State U. New Jersey, New Brunswick	57	35,580	26,313	29,660	25,703	2,229	6,321	2,211	12,903	2,039
Arizona State U.	58	26,376	24,779	26,050	25,619	0	13,030	0	12,338	251
U. Florida	59	28,062	25,940	26,341	25,532	1,339	10,773	0	13,128	292
U. Delaware	60	23,387	23,634	27,410	25,192	1,080	8,146	10,537	5,429	0
Washington State U.	61	32,219	31,387	32,628	24,243	209	8,512	1,111	12,549	1,862
Virginia Polytechnic Institute and State U.	62	18,453	21,049	26,835	24,214	39	14,242	1,025	7,831	1,077
U. Southern California	63	16,075	17,751	20,109	23,644	16	14,232	1,433	5,508	2,455
North Carolina State U.	64	19,270	21,204	22,753	23,464	0	11,821	0	11,615	28
Washington U., Saint Louis	65	21,811	22,345	24,852	23,401	0	12,722	5,619	5,060	0
U. Iowa	66	21,629	25,142	24,300	23,226	712	5,415	0	17,099	0
Emory U.	67	21,099	22,517	23,150	22,505	0	19,048	0	3,433	24
Duke U.	68	17,992	19,322	21,176	22,396	0	9,809	0	12,587	0
Louisiana State U., Baton Rouge	69	19,472	24,133	23,944	22,366	0	8,252	0	13,851	263
Carnegie Mellon U.	70	18,921	20,096	19,508	21,580	0	9,207	291	11,458	624
U. Tennessee, Knoxville ^c	71	22,091	24,307	25,677	21,239	0	6,816	0	14,423	0
Dartmouth C. and Dartmouth Hitchcock Medical Center	72	19,855	18,977	18,757	21,219	0	9,198	0	12,021	0
Northeastern U.	73	16,426	17,483	19,445	20,709	0	7,636	13	12,711	349
Georgia State U.	74	17,949	17,221	17,836	19,395	4,102	9,304	0	5,727	262
U. Massachusetts, Lowell	75	13,425	14,184	17,976	19,144	0	4,475	0	14,669	0
U. Texas M. D. Anderson Cancer Center	76	12,763	15,858	19,017	19,060	0	0	0	19,060	0

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U. Oklahoma, Norman and Health Science Center	77	12,061	14,899	15,362	18,739	0	12,342	0	6,397	0
SUNY, Binghamton U.	78	16,304	20,446	14,920	18,586	0	11,900	0	6,624	62
U. Connecticut	79	15,352	16,816	16,829	18,546	0	5,868	6,644	6,034	0
Temple U.	80	17,047	15,235	16,205	18,447	0	9,606	0	6,708	2,133
U. Maryland, Baltimore County	81	14,000	13,821	17,039	18,278	13,778	1,558	189	2,753	0
Montana State U., Bozeman	82	12,248	10,912	15,021	17,990	0	8,796	0	9,194	0
U. Texas, Dallas	83	14,048	12,433	15,515	17,759	3,602	5,614	32	5,219	3,292
Brown U.	84	18,050	20,720	19,259	17,745	0	5,201	0	7,968	4,576
Catholic U. of America	85	18,592	19,319	17,660	17,669	0	659	0	12,213	4,797
U. Texas, Arlington	86	13,273	16,067	15,590	17,257	0	5,740	0	10,782	735
U. California, Riverside	87	17,562	16,505	16,166	17,037	0	9,260	0	7,777	0
Wayne State U.	88	14,693	17,898	20,013	16,895	0	10,163	0	3,654	3,078
New Jersey Institute of Technology	89	12,988	13,042	15,338	15,829	8,008	3,563	510	3,748	0
U. Illinois, Chicago	90	13,332	12,602	14,456	15,752	0	7,868	0	7,884	0
U. Alaska, Fairbanks	91	14,459	13,107	13,534	15,551	15,424	57	0	0	70
Tufts U.	92	7,207	68,855	11,377	15,438	281	10,325	2,793	1,621	418
Auburn U., Auburn	93	9,622	11,626	13,220	15,247	0	7,222	60	7,842	123
Texas Tech U.	94	14,532	15,455	14,408	15,103	0	7,136	548	7,419	0
Syracuse U.	95	14,282	13,242	15,894	13,905	0	4,276	0	9,629	0
Rochester Institute of Technology	96	12,393	12,578	18,059	13,830	0	522	0	3,504	9,804
U. Southern Mississippi	97	11,528	13,416	15,682	13,422	0	11,328	0	7	2,087
U. Alabama, Huntsville	98	10,415	14,459	12,963	13,353	10,224	1,300	0	1,767	62
U. Oregon	99	13,591	13,908	14,773	12,984	0	4,910	737	7,248	89
West Virginia U.	100	12,133	15,392	14,339	12,678	0	4,868	0	7,810	0
Kansas State U.	101	9,960	13,475	14,413	12,583	0	4,374	0	8,209	0
Rensselaer Polytechnic Institute	102	16,534	14,662	15,038	12,143	0	5,704	0	2,554	3,885
U. Mississippi	103	13,606	10,951	14,617	11,652	0	3,994	0	7,658	0
U. South Florida, Tampa	104	11,895	12,725	14,060	11,433	0	6,507	0	4,213	713

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Colorado State U., Fort Collins	105	10,825	13,908	14,464	11,356	0	8,042	71	2,855	388
Colorado School of Mines	106	9,396	8,980	8,796	11,346	0	2,691	697	5,398	2,560
U. Georgia	107	11,280	19,257	13,275	11,295	589	8,005	0	2,701	0
U. Texas, San Antonio	108	12,884	11,561	10,617	11,234	0	6,980	0	4,254	0
SUNY, U. Buffalo	109	13,498	13,301	11,644	11,161	0	7,461	174	3,526	0
Clemson U.	110	9,963	12,320	11,401	10,823	0	4,327	195	5,747	554
Mississippi State U.	111	8,992	10,131	11,312	10,381	21	6,041	718	3,475	126
Jackson State U.	112	7,259	8,859	9,159	9,903	0	8,452	0	1,451	0
U. Arkansas, Fayetteville	113	8,332	9,667	9,454	9,791	0	5,478	0	4,313	0
Oklahoma State U., Stillwater	114	8,398	8,503	8,458	9,784	0	5,180	0	4,604	0
U. Nevada, Las Vegas	115	8,772	9,520	9,099	9,692	263	5,140	4	3,807	478
CUNY, City C.	116	12,506	10,496	9,935	9,591	0	5,164	0	3,361	1,066
U. Nevada, Reno	117	6,594	11,017	10,153	9,566	480	3,903	107	4,235	841
Brandeis U.	118	10,684	10,266	9,838	9,384	0	2,502	0	6,866	16
Boston C.	119	8,233	8,313	9,572	9,306	0	7,492	0	1,814	0
U. North Texas, Denton	120	6,424	5,358	7,586	9,275	0	5,586	0	3,689	0
U. Missouri, Columbia	121	14,109	13,985	10,286	9,173	0	5,730	0	3,443	0
Naval Postgraduate School	122	6,377	6,105	8,797	9,161	517	348	172	6,244	1,880
Georgetown U.	123	6,827	6,488	7,281	9,151	0	3,318	0	5,833	0
U. Cincinnati	124	8,699	9,056	9,641	8,874	0	5,796	0	3,078	0
U. Wisconsin-Milwaukee	125	13,372	14,409	11,076	8,699	0	2,173	0	6,526	0
U. Akron	126	11,144	10,305	9,643	8,576	0	8,576	0	0	0
U. Kentucky	127	7,525	7,069	8,173	8,553	0	4,802	0	3,751	0
Kent State U.	128	7,455	6,597	7,744	8,381	94	2,091	2,685	2,591	920
George Washington U.	129	6,494	7,191	7,634	8,313	3	3,976	0	4,334	0
U. California, Office of the President	130	14,584	13,253	7,973	8,123	8,123	0	0	0	0
Case Western Reserve U.	131	11,782	5,756	10,756	8,063	273	2,955	3,032	1,767	36
U. New Mexico	131	8,789	8,970	7,148	8,063	1,045	2,704	35	4,272	7

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Air Force Institute of Technology	133	4,668	5,871	8,478	7,796	0	0	0	7,796	0
SUNY, U. Albany	134	6,946	7,858	7,811	7,719	0	5,292	0	2,427	0
U. California, Merced	135	6,530	6,260	7,307	7,593	0	2,630	1,862	3,101	0
U. Montana, Missoula	136	5,060	6,570	7,749	7,592	0	2,782	0	260	4,550
U. Kansas	137	12,224	8,845	8,686	7,502	560	4,499	333	2,108	2
U. Toledo	138	7,360	8,752	7,438	7,445	741	1,935	0	4,645	124
Xavier U. Louisiana	139	8,007	6,921	5,879	7,186	0	7,186	0	0	0
Rockefeller U.	140	8,466	8,539	7,577	7,184	0	4,720	0	2,464	0
Northern Arizona U.	141	2,755	3,763	5,643	7,064	4,687	799	478	941	159
Old Dominion U.	142	7,626	6,562	7,547	7,028	0	2,297	0	4,731	0
Baylor U.	143	6,908	6,994	6,891	6,993	29	3,921	0	2,968	75
U. Texas, El Paso	144	7,737	7,841	7,587	6,775	0	4,620	0	2,155	0
Utah State U.	145	4,873	5,962	6,756	6,606	0	3,101	0	2,462	1,043
North Dakota State U.	146	8,121	6,900	6,903	6,502	0	3,106	2,664	732	0
U. Alabama, Tuscaloosa	147	6,275	7,501	5,815	6,471	4	2,937	0	3,530	0
San Diego State U.	148	5,488	5,873	6,333	6,402	766	4,075	0	1,561	0
U. Maine	149	3,978	5,451	7,628	6,351	0	1,087	0	5,264	0
Missouri U. of Science and Technology	150	3,008	3,614	3,463	6,107	0	2,315	0	3,792	0
William & Mary	151	5,565	5,219	6,554	5,781	0	501	0	5,280	0
Tulane U.	152	6,900	5,732	6,448	5,720	0	2,734	0	2,986	0
California Polytechnic State U., San Luis Obispo	153	2,057	1,884	7,589	5,672	0	456	0	2,494	2,722
George Mason U.	154	4,100	4,783	6,295	5,586	3,292	304	904	842	244
Northern Illinois U.	155	4,661	6,446	6,106	5,560	0	1,536	0	4,024	0
Georgia Southern U.	156	882	842	692	5,465	144	1,476	3,725	120	0
California State U., Northridge	157	3,302	2,672	3,225	5,407	357	666	0	2,567	1,817
Ohio U.	158	5,893	5,358	4,501	5,370	0	1,399	0	3,971	0
Howard U.	159	3,808	4,058	5,277	5,308	0	4,546	0	762	0
Brigham Young U., Provo	160	4,894	4,905	5,854	5,268	0	3,234	0	2,034	0

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California State U., Los Angeles	161	4,409	5,202	6,385	5,241	0	4,602	0	639	0
U. Miami	162	7,502	5,861	5,567	5,150	0	1,437	0	3,713	0
U. Texas Rio Grande Valley	163	3,398	2,843	4,499	5,148	2,354	1,669	13	595	517
U. Denver	164	4,273	4,589	4,083	4,913	143	3,314	0	1,456	0
U. Vermont	165	2,066	2,297	3,235	4,877	0	2,415	21	2,441	0
Oakland U.	166	2,192	2,026	4,650	4,821	0	2,521	0	2,300	0
Oregon State U.	167	4,131	4,801	6,247	4,814	69	2,788	551	1,310	96
American U.	168	2,504	3,545	5,167	4,714	0	847	0	3,867	0
U. Alabama, Birmingham	169	5,667	7,211	5,961	4,678	0	1,018	1,169	2,491	0
U. South Carolina, Columbia	170	12,942	7,025	7,007	4,651	0	1,205	0	2,806	640
Delaware State U.	171	3,764	3,709	4,306	4,461	0	613	0	3,848	0
U. Puerto Rico, Rio Piedras	172	6,260	3,739	5,127	4,429	0	2,776	0	1,653	0
U. New Hampshire	173	2,234	4,554	3,521	4,425	0	1,428	325	2,672	0
CUNY, Hunter C.	174	3,628	4,500	4,739	4,197	0	3,003	0	1,194	0
CUNY, Advanced Science Research Center	175	1,130	747	2,983	4,154	0	1,376	0	2,778	0
Michigan Technological U.	176	3,285	3,486	3,722	4,094	0	1,925	0	2,169	0
U. South Dakota	177	2,464	2,957	5,059	4,054	0	2,499	0	1,555	0
U. North Carolina, Charlotte	178	3,060	3,935	4,389	4,003	0	1,261	0	2,742	0
U. Rhode Island	179	3,764	3,713	3,194	3,869	0	2,081	0	100	1,688
Southern Methodist U.	180	3,570	3,339	3,591	3,847	0	1,469	0	2,378	0
Boise State U.	181	1,117	3,737	3,358	3,788	147	857	2,582	202	0
U. Massachusetts, Boston	182	1,763	2,273	3,363	3,584	0	2,370	0	1,214	0
Villanova U.	183	1,983	2,248	2,743	3,573	682	2,371	0	520	0
U. Louisiana, Lafayette	184	3,232	3,011	1,369	3,546	0	1,256	1,007	1,283	0
U. North Carolina, Greensboro	185	3,748	3,494	3,521	3,505	0	2,028	0	50	1,427

TABLE 47

Higher education R&D expenditures in the physical sciences, ranked by all FY 2020 physical sciences: FYs 2017–20 and by subfield for FY 2020

(Dollars in thousands)

Institution	Rank	2017	2018	2019	2020					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Virginia Commonwealth U.	186	2,873	3,607	3,469	3,499	0	2,250	0	1,249	0
Lehigh U.	187	4,731	5,081	3,396	3,495	0	2,147	0	1,348	0
U. North Dakota	188	6,041	3,119	3,607	3,489	0	2,212	154	1,123	0
San Francisco State U.	189	3,779	3,734	3,088	3,200	203	1,466	95	1,351	85
Florida Atlantic U.	190	3,640	2,653	2,794	3,147	0	1,772	0	991	384
Illinois Institute of Technology	191	4,075	3,843	3,609	3,143	0	319	324	2,476	24
Hampton U.	192	4,615	4,129	4,044	3,142	0	0	0	3,142	0
North Carolina Central U.	193	4,019	3,575	2,774	3,027	0	149	0	2,878	0
U. Memphis	194	1,414	1,883	2,157	3,014	80	2,143	0	791	0
U. Louisville	195	1,654	1,805	3,058	2,954	147	1,820	192	426	369
Florida Institute of Technology	196	2,398	2,253	2,078	2,777	944	469	0	1,364	0
Worcester Polytechnic Institute	197	2,959	3,096	4,991	2,773	0	1,422	0	1,351	0
Embry-Riddle Aeronautical U.	198	849	1,954	2,332	2,744	0	0	0	1,787	957
U.S. Air Force Academy	199	3,433	1,521	2,933	2,714	0	0	0	2,714	0
Marquette U.	200	1,933	2,789	2,517	2,681	0	2,361	0	320	0
California State U., Long Beach	201	3,808	4,445	4,363	2,670	194	2,474	2	0	0
Haverford C.	202	585	1,195	2,039	2,581	255	394	1,784	147	1
Central Michigan U.	203	1,993	2,426	2,908	2,508	105	31	0	2,366	6
San Jose State U.	204	1,498	1,649	2,041	2,445	24	1,787	0	626	8
Drexel U.	205	2,663	3,806	2,793	2,437	0	902	1,277	258	0
U. New Orleans	206	2,090	1,939	2,144	2,398	0	1,595	0	803	0
Rutgers, State U. New Jersey, Newark	207	2,099	2,162	1,978	2,384	0	1,976	0	408	0
Wesleyan U.	208	2,904	2,998	2,876	2,383	477	776	0	1,130	0
Bowling Green State U.	209	2,455	3,112	2,362	2,326	0	1,477	0	849	0
Duquesne U.	209	2,410	2,631	2,581	2,326	0	2,204	0	122	0
Portland State U.	209	4,101	3,450	2,911	2,326	0	1,782	126	418	0
Indiana U.-Purdue U., Indianapolis	212	1,889	2,132	2,396	2,324	0	1,799	0	509	16
Clarkson U.	213	1,091	1,055	2,498	2,217	0	1,829	0	388	0
CUNY, Lehman C.	214	1,952	2,181	1,624	2,208	101	1,698	0	409	0

TABLE 47

Higher education R&D expenditures in the physical sciences, ranked by all FY 2020 physical sciences: FYs 2017–20 and by subfield for FY 2020

(Dollars in thousands)

Institution	Rank	2017	2018	2019	2020					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Texas State U.	214	3,671	3,248	2,741	2,208	0	1,141	0	735	332
Wake Forest U.	216	2,162	1,755	3,071	2,196	0	575	255	1,366	0
East Carolina U.	217	613	1,464	2,177	2,168	0	1,354	0	814	0
U.S. Naval Academy	218	2,714	2,173	2,794	2,144	0	927	0	1,217	0
U. Massachusetts, Dartmouth	219	1,217	1,208	1,755	2,116	0	1,601	16	499	0
Chapman U.	220	2,306	1,280	1,816	2,062	0	370	0	81	1,611
Mercer U.	221	20	1,694	2,189	2,038	0	1,951	0	87	0
Southern Illinois U., Carbondale	222	3,304	3,163	1,619	2,013	0	1,318	251	327	117
South Dakota State U.	223	3,922	2,964	2,951	1,974	0	1,941	0	33	0
Saint Louis U.	224	1,092	1,685	2,384	1,942	0	1,786	0	156	0
U. Missouri, Saint Louis	225	2,034	2,333	2,636	1,910	143	1,764	0	3	0
Stevens Institute of Technology	226	1,461	1,520	2,045	1,834	0	10	0	1,824	0
Western Kentucky U.	227	2,793	2,019	1,845	1,785	0	1,360	0	425	0
Louisiana Tech U.	228	2,023	2,058	1,843	1,775	0	711	0	980	84
Wright State U.	229	2,480	2,720	1,757	1,774	0	390	0	1,250	134
U. Missouri, Kansas City	230	2,193	2,168	2,026	1,680	195	591	0	894	0
California State U., San Marcos	231	203	1,106	901	1,667	0	61	0	841	765
Clark Atlanta U.	232	1,713	992	1,265	1,649	0	978	0	671	0
Clark U.	233	633	664	889	1,648	0	594	0	1,054	0
North Carolina Agricultural and Technical State U.	234	1,083	1,808	1,889	1,638	0	522	0	1,116	0
California State U., San Bernardino	235	1,233	1,337	1,219	1,569	25	4	992	0	548
Cleveland State U.	236	1,750	1,318	1,372	1,547	0	761	0	786	0
U. Idaho	237	3,007	1,871	2,030	1,539	630	613	48	245	3
Amherst C.	238	1,526	1,500	2,374	1,534	47	782	0	705	0
Morehouse C.	239	2,136	2,740	1,704	1,517	0	177	0	216	1,124
U. San Diego	240	832	975	1,300	1,496	0	578	0	918	0
Creighton U.	241	1,699	1,381	1,691	1,463	0	626	0	837	0
CUNY, Queens C.	242	1,160	1,463	1,446	1,444	0	955	0	458	31
Texas A&M U.-Corpus Christi	243	361	356	1,362	1,437	0	181	92	0	1,164

TABLE 47

Higher education R&D expenditures in the physical sciences, ranked by all FY 2020 physical sciences: FYs 2017–20 and by subfield for FY 2020

(Dollars in thousands)

Institution	Rank	2017	2018	2019	2020					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
South Dakota School of Mines and Technology	244	1,876	1,848	1,602	1,425	0	732	0	693	0
Bryn Mawr C.	245	1,375	1,285	1,057	1,423	0	758	0	462	203
Florida A&M U.	246	3,501	6,083	3,488	1,410	0	39	0	1,371	0
California State Polytechnic U., Pomona	247	703	1,701	693	1,395	1,196	110	0	89	0
Idaho State U.	248	3,900	4,490	3,709	1,372	0	564	66	742	0
New Mexico Institute of Mining and Technology	249	1,288	1,464	1,970	1,361	0	287	0	1,074	0
Prairie View A&M U.	250	1,644	1,741	1,082	1,353	0	421	0	932	0
U. Puerto Rico, Mayaguez	251	2,371	1,739	1,172	1,347	0	980	0	367	0
James Madison U.	252	654	1,297	1,295	1,337	37	766	0	298	236
Miami U.	253	1,955	1,913	1,046	1,329	0	1,185	0	142	2
Western Washington U.	254	1,325	1,322	1,183	1,323	286	1,037	0	0	0
Hope C.	255	2,500	1,859	1,843	1,315	0	615	0	560	140
Western Michigan U. and Homer Stryker M.D. School of Medicine	256	1,274	1,266	1,221	1,309	0	649	0	660	0
California State U., Fullerton	257	941	1,156	1,180	1,254	607	166	0	481	0
U. Wyoming	258	2,866	4,632	1,825	1,248	0	554	0	679	15
Williams C.	259	1,265	1,372	1,312	1,245	208	156	0	315	566
U. Maryland, Eastern Shore	260	69	1,305	1,278	1,243	0	7	0	0	1,236
Trinity U.	261	905	1,316	1,369	1,230	0	1,012	0	218	0
Troy U.	262	ne	ne	ne	1,216	0	0	1,216	0	0
U. Colorado Denver and Anschutz Medical Campus	263	942	829	1,385	1,192	0	838	0	348	6
Tennessee Technological U.	264	1,255	1,491	1,289	1,178	0	583	0	594	1
California State U., Fresno	265	1,069	1,114	1,157	1,127	0	748	0	283	96
Wichita State U.	266	666	649	947	1,114	0	945	0	0	169
CUNY, Brooklyn C.	267	1,749	1,240	1,067	1,105	0	789	0	193	123

TABLE 47

Higher education R&D expenditures in the physical sciences, ranked by all FY 2020 physical sciences: FYs 2017–20 and by subfield for FY 2020

(Dollars in thousands)

Institution	Rank	2017	2018	2019	2020					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
U. Arkansas, Little Rock	267	246	905	926	1,105	0	1,088	17	0	0
U. Puerto Rico, Humacao	269	ne	933	852	1,090	201	200	689	0	0
St. Edward's U.	270	1,624	760	456	1,074	219	750	0	55	50
Marshall U.	271	850	499	684	1,030	0	1,019	0	11	0
Kennesaw State U.	272	1,895	944	2,079	1,019	0	731	0	288	0
Dillard U.	273	1,123	797	606	975	0	16	0	959	0
South Carolina State U.	274	1,552	1,630	930	965	174	0	0	182	609
U. North Carolina, Asheville	275	506	313	680	958	42	180	0	0	736
California State U., East Bay	276	ne	ne	ne	939	0	296	0	584	59
Texas A&M U.-Commerce	276	550	1,125	883	939	0	129	0	810	0
Furman U.	278	1,286	1,146	983	925	0	913	0	12	0
Southern Illinois U., Edwardsville	279	876	1,720	586	911	0	911	0	0	0
U. Northern Iowa	279	644	731	1,289	911	0	825	0	86	0
U. of the Virgin Islands	281	0	0	15	908	0	159	0	749	0
Reed C.	282	123	374	623	886	0	757	0	129	0
Barnard C.	283	739	520	1,004	885	544	341	0	0	0
Arkansas State U., Jonesboro	284	1,109	745	988	876	0	840	0	36	0
Pomona C.	285	588	652	519	872	323	446	0	103	0
U. Dayton	286	1,932	1,579	1,247	868	0	8	422	438	0
CUNY, C. Staten Island	287	709	1,547	1,657	860	0	311	0	542	7
Grambling State U.	288	1,250	1,063	845	852	0	468	0	65	319
Southern Connecticut State U.	289	643	622	430	846	616	118	0	13	99
U. Minnesota, Duluth	290	914	1,005	1,065	840	0	717	0	123	0
Ball State U.	291	398	700	993	834	0	801	0	9	24
Christopher Newport U.	292	413	386	758	829	0	63	0	766	0
U. Wisconsin-Eau Claire	293	901	716	930	814	14	457	343	0	0
U.S. Military Academy	293	448	120	35	814	13	419	0	269	113
SUNY, Geneseo	295	879	932	902	785	0	102	0	683	0
Long Island U.	296	77	60	198	784	0	675	0	109	0

TABLE 47

Higher education R&D expenditures in the physical sciences, ranked by all FY 2020 physical sciences: FYs 2017–20 and by subfield for FY 2020

(Dollars in thousands)

Institution	Rank	2017	2018	2019	2020					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Northern Kentucky U.	297	420	490	701	778	77	431	0	270	0
Loyola U., Chicago	298	907	1,128	1,286	763	0	711	0	52	0
Lewis and Clark C.	299	498	313	268	749	0	151	0	598	0
Fordham U.	300	295	68	868	747	0	747	0	0	0
Grinnell C.	301	978	1,127	1,012	742	59	625	0	58	0
Southern U. and A&M C., Baton Rouge	302	1,895	1,556	1,167	735	0	101	0	634	0
Swarthmore C.	303	960	1,120	946	734	150	231	0	353	0
Norfolk State U.	304	792	800	819	726	0	76	0	650	0
Spelman C.	305	184	620	595	713	0	713	0	0	0
Carleton C.	306	425	640	723	704	132	488	0	84	0
C. Charleston	307	1,255	880	923	700	170	131	264	135	0
U. Central Oklahoma	308	456	718	701	696	0	139	0	557	0
Texas Christian U.	309	873	784	690	695	0	377	0	299	19
Eastern Michigan U.	310	359	357	491	690	68	410	98	114	0
U. North Florida	311	667	568	524	682	0	485	0	197	0
Rowan U.	312	894	1,056	1,190	664	0	388	0	276	0
Texas Southern U.	313	181	196	211	661	0	661	0	0	0
Kettering U.	314	721	503	211	648	0	115	0	285	248
Alabama A&M U.	315	1,582	1,257	932	636	0	305	0	331	0
CUNY, Graduate Center	316	8	0	353	630	0	0	0	630	0
Colgate U.	317	526	682	769	618	39	432	0	147	0
Middle Tennessee State U.	318	958	388	417	596	251	345	0	0	0
Montclair State U.	319	187	256	260	589	39	507	0	43	0
U. Central Arkansas	320	726	622	665	585	0	505	0	80	0
U. of the Sciences Philadelphia	321	495	730	644	580	0	533	0	47	0
U. West Florida	322	488	472	695	576	0	0	0	0	576
CUNY, York C.	323	ne	ne	883	568	23	331	0	214	0
Illinois State U.	324	587	658	886	567	0	338	0	229	0
California State U., Dominguez Hills	325	734	837	821	556	0	531	0	25	0

TABLE 47

Higher education R&D expenditures in the physical sciences, ranked by all FY 2020 physical sciences: FYs 2017–20 and by subfield for FY 2020

(Dollars in thousands)

Institution	Rank	2017	2018	2019	2020					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Winston-Salem State U.	326	309	255	320	554	31	437	0	86	0
Harvey Mudd C.	327	565	929	526	543	0	259	0	284	0
New Mexico Highlands U.	328	724	714	ne	541	0	541	0	0	0
U. Maryland Center for Environmental Science	328	841	702	289	541	0	416	0	72	53
U. Arkansas, Pine Bluff	330	326	405	448	540	0	540	0	0	0
Franklin and Marshall C.	331	635	994	722	539	55	406	0	78	0
Bucknell U.	332	595	650	538	512	100	252	0	160	0
CUNY, John Jay C. of Criminal Justice	333	410	329	222	507	0	220	0	238	49
Mount Holyoke C.	334	1,547	1,248	1,037	496	360	114	0	22	0
Santa Clara U.	335	438	792	423	487	0	342	0	145	0
Oberlin C.	336	800	616	485	483	0	213	0	270	0
Sam Houston State U.	337	390	390	550	481	0	407	0	74	0
Towson U.	338	364	898	787	476	39	246	0	191	0
Fort Lewis C.	339	ne	ne	1	470	0	44	426	0	0
Tennessee State U.	340	951	511	452	457	400	57	0	0	0
Calvin U.	341	583	542	462	441	0	310	0	131	0
East Tennessee State U.	342	193	425	368	439	121	91	0	227	0
U. South Alabama	343	319	278	471	433	0	407	0	26	0
U. Richmond	344	946	600	450	430	0	318	0	112	0
Middlebury C.	345	530	418	459	429	150	253	0	19	7
Indiana U. Pennsylvania	346	315	208	269	425	0	207	0	218	0
West Chester U. Pennsylvania	346	739	648	504	425	72	255	0	98	0
U. Tulsa	348	1,291	866	585	424	0	261	0	163	0
Albion C.	349	406	273	380	422	17	204	0	84	117
Missouri State U.	350	164	180	386	418	91	22	0	305	0
U. Wisconsin-La Crosse	351	288	406	298	416	0	228	0	188	0
Occidental C.	352	229	355	424	414	0	181	0	103	130
Morgan State U.	353	285	116	34	411	0	177	0	234	0

TABLE 47

Higher education R&D expenditures in the physical sciences, ranked by all FY 2020 physical sciences: FYs 2017–20 and by subfield for FY 2020

(Dollars in thousands)

Institution	Rank	2017	2018	2019	2020					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Appalachian State U.	354	528	330	262	408	65	226	2	115	0
Bates C.	355	695	575	531	405	39	211	0	155	0
St. John's U., New York	355	950	311	273	405	0	329	0	76	0
U. Houston-Clear Lake	357	463	676	520	403	0	26	0	0	377
Seton Hall U.	358	0	0	0	401	0	401	0	0	0
Florida Gulf Coast U.	359	37	0	138	397	140	257	0	0	0
Colby C.	360	416	512	397	391	0	302	0	89	0
Wellesley C.	360	926	1,240	1,426	391	0	283	0	0	108
Providence C.	362	165	175	93	390	20	370	0	0	0
Lafayette C.	363	256	348	379	388	0	156	0	227	5
Ithaca C.	364	ne	ne	ne	378	280	76	0	22	0
Macalester C.	365	603	458	435	377	0	206	0	171	0
U. North Carolina, Wilmington	366	562	525	597	375	0	208	0	110	57
Grand Valley State U.	367	456	634	276	374	0	364	0	10	0
C. New Jersey	368	216	305	ne	366	0	54	0	312	0
Skidmore C.	369	201	253	334	363	0	314	0	49	0
U. Ana G. Mendez, Gurabo	370	295	396	1,061	362	0	362	0	0	0
Rhode Island C.	371	154	130	132	361	0	0	0	179	182
Tougaloo C.	371	80	848	849	361	0	280	0	81	0
William Paterson U.	371	58	189	264	361	0	267	0	94	0
West Virginia State U.	374	204	353	235	357	0	357	0	0	0
Whitman C.	375	ne	ne	460	356	6	246	0	104	0
Rutgers, State U. New Jersey, Camden	376	9	19	80	354	0	322	0	32	0
Connecticut C.	377	641	542	902	350	0	350	0	0	0
Youngstown State U.	378	393	92	135	346	141	182	0	23	0
U. Wisconsin-River Falls	379	512	378	ne	330	0	155	0	175	0
Southeastern Louisiana U.	380	254	304	106	326	0	213	0	113	0
Smith C.	381	280	433	499	321	2	217	0	102	0
U. Nebraska, Kearney	382	848	230	652	320	15	281	0	17	7
Winthrop U.	383	213	358	443	317	0	150	167	0	0
SUNY, Oswego	384	505	538	388	314	0	291	0	23	0
U. of the Pacific	385	164	248	431	307	108	144	0	55	0

TABLE 47

Higher education R&D expenditures in the physical sciences, ranked by all FY 2020 physical sciences: FYs 2017–20 and by subfield for FY 2020

(Dollars in thousands)

Institution	Rank	2017	2018	2019	2020					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Central Washington U.	386	280	322	229	306	0	197	0	109	0
DePaul U.	387	241	243	229	305	0	38	0	267	0
Johnson C. Smith U.	388	0	228	66	300	0	300	0	0	0
Kenyon C.	388	ne	506	444	300	0	9	0	291	0
CUNY, Baruch C.	390	232	293	375	297	0	21	0	276	0
California State U., Sacramento	391	283	267	344	296	0	89	0	207	0
SUNY, C. of Environmental Science and Forestry	392	336	175	257	294	160	94	0	0	40
Yeshiva U.	393	0	0	0	286	0	0	0	286	0
U. New Haven	394	0	207	576	285	0	122	161	2	0
Bowie State U.	395	111	293	246	272	0	175	0	0	97
U. Colorado Colorado Springs	396	807	472	217	270	0	0	0	145	125
Willamette U.	397	225	353	363	269	0	161	0	108	0
Union C., Schenectady	398	290	309	609	268	120	38	0	110	0
Tarleton State U.	399	98	125	303	263	0	257	0	0	6
Fayetteville State U.	400	616	300	200	260	0	212	0	48	0
Clafin U.	401	484	600	508	258	0	208	0	50	0
Western Carolina U.	402	157	196	342	253	0	253	0	0	0
U. Puget Sound	403	210	ne	ne	252	0	156	0	96	0
Vassar C.	404	234	773	172	250	0	18	0	232	0
Framingham State U.	405	17	28	ne	247	0	247	0	0	0
Davidson C.	406	489	333	352	242	0	154	43	45	0
Bowdoin C.	407	267	338	364	239	0	77	0	131	31
C. Wooster	408	338	642	568	235	0	160	0	75	0
U. of St. Thomas (MN)	408	323	234	360	235	0	94	0	61	80
Loyola Marymount U.	410	266	266	423	233	0	231	0	2	0
U. of the Incarnate Word	411	ne	602	418	226	0	226	0	0	0
Salish Kootenai C.	412	665	869	553	222	0	222	0	0	0
U. Hawaii, Hilo	413	368	479	164	217	2	179	0	36	0
CUNY, Medgar Evers C.	414	313	359	362	216	50	166	0	0	0

TABLE 47

Higher education R&D expenditures in the physical sciences, ranked by all FY 2020 physical sciences: FYs 2017–20 and by subfield for FY 2020

(Dollars in thousands)

Institution	Rank	2017	2018	2019	2020					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
CUNY, New York City C. of Technology	415	ne	48	350	212	0	0	0	212	0
Fisk U.	415	2,725	197	0	212	0	0	0	200	12
Salisbury U.	415	177	128	534	212	0	169	0	43	0
West Texas A&M U.	418	49	46	127	211	0	211	0	0	0
Hamilton C.	419	208	238	198	208	0	164	0	44	0
Purdue U., Northwest	420	229	305	115	207	0	207	0	0	0
Azusa Pacific U.	421	307	332	179	205	0	137	0	68	0
Texas Woman's U.	422	93	145	155	204	49	0	0	0	155
Gettysburg C.	423	92	399	301	203	0	55	0	80	68
Sonoma State U.	423	ne	ne	ne	203	0	88	0	0	115
U. Puerto Rico, Cayey	423	231	138	140	203	0	155	0	48	0
Andrews U.	426	ne	ne	184	196	191	0	0	5	0
Saint Joseph's U.	427	303	284	508	194	0	128	0	66	0
Humboldt State U.	428	108	127	201	193	0	39	10	144	0
Murray State U.	429	83	222	358	185	0	165	0	20	0
U. Alaska, Anchorage	430	22	17	16	184	125	59	0	0	0
California State U., Chico	431	4	126	186	182	6	26	0	150	0
Hobart and William Smith Colleges	432	264	ne	263	175	0	30	0	95	50
C. of Saint Benedict	433	209	179	176	167	0	130	0	37	0
Saint Michael's C.	433	135	273	269	167	0	125	0	42	0
Tuskegee U.	435	472	383	163	166	0	134	0	32	0
Seattle U.	436	152	208	157	165	0	86	0	79	0
Texas A&M U.-Kingsville	437	170	83	196	164	0	163	0	1	0
Indiana State U.	438	148	168	155	160	0	39	0	121	0
Fort Hays State U.	439	ne	ne	155	158	0	72	0	86	0
U. Washington, Bothell	440	0	35	256	156	0	0	0	156	0
Fairfield U.	441	702	95	442	153	0	84	0	52	17
Wheaton C., Wheaton	442	93	93	201	150	0	57	0	93	0
Benedict C.	443	314	518	374	146	0	146	0	0	0

TABLE 47

Higher education R&D expenditures in the physical sciences, ranked by all FY 2020 physical sciences: FYs 2017–20 and by subfield for FY 2020

(Dollars in thousands)

Institution	Rank	2017	2018	2019	2020					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Claremont McKenna C.	444	67	40	144	144	0	85	0	59	0
Pace U.	445	350	349	199	138	0	138	0	0	0
U. Michigan, Dearborn	446	230	107	217	135	0	0	0	0	135
Mercyhurst U.	447	35	ne	129	132	0	57	0	75	0
Saint John's U., Collegeville	447	172	141	139	132	0	99	0	33	0
U. Wisconsin-Oshkosh	449	113	119	124	128	20	52	0	56	0
Purdue U., Fort Wayne	450	72	61	101	126	0	123	0	3	0
SUNY, C. Plattsburgh	450	275	393	376	126	0	0	0	126	0
U. Wisconsin-Green Bay	452	76	87	127	125	0	62	0	63	0
Doane U.	453	ne	251	121	123	0	123	0	0	0
Montana Technological U.	453	243	110	62	123	0	123	0	0	0
U. Northern Colorado	455	92	236	110	122	19	53	0	50	0
Pacific U.	456	870	878	962	120	8	71	0	41	0
Citadel Military C. South Carolina	457	ne	ne	ne	119	0	23	0	0	96
Black Hills State U.	458	695	414	407	116	0	0	0	116	0
California Lutheran U.	459	ne	ne	91	112	0	95	0	17	0
U. Minnesota, Morris	460	55	ne	24	110	0	94	0	16	0
Weber State U.	460	ne	ne	ne	110	0	74	0	36	0
Langston U.	462	41	40	37	109	0	0	0	0	109
St. Olaf C.	463	302	254	139	106	0	75	0	31	0
U. Wisconsin-Stevens Point	464	66	79	92	105	0	62	0	43	0
Roger Williams U.	465	645	331	154	101	0	3	0	0	98
U. Wisconsin-Platteville	465	78	ne	99	101	0	101	0	0	0
Suffolk U.	467	263	ne	ne	100	0	97	0	3	0
Eastern Kentucky U.	468	305	65	0	95	0	55	0	40	0
California State U., Bakersfield	469	88	6	420	91	0	91	0	0	0
U. North Georgia	469	47	71	68	91	0	0	0	91	0
Biola U.	471	73	78	82	85	0	35	0	50	0

TABLE 47

Higher education R&D expenditures in the physical sciences, ranked by all FY 2020 physical sciences: FYs 2017–20 and by subfield for FY 2020

(Dollars in thousands)

Institution	Rank	2017	2018	2019	2020					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Milwaukee School of Engineering	471	86	49	69	85	0	0	0	85	0
Elon U.	473	139	146	89	83	0	39	0	27	17
Central Connecticut State U.	474	67	ne	118	82	0	78	0	4	0
New Jersey City U.	474	1,185	2,105	60	82	0	82	0	0	0
Bradley U.	476	69	150	279	81	0	81	0	0	0
Lamar U.	477	133	158	188	80	0	54	0	26	0
Western Illinois U.	478	8	12	57	78	0	39	0	39	0
Florida Polytechnic U.	479	ne	ne	68	76	0	17	0	59	0
Colorado C.	480	417	267	102	75	0	38	0	37	0
U. North Carolina, general administration	480	0	1,452	632	75	0	0	0	0	75
SUNY, C. Brockport	482	5	4	48	74	0	69	0	5	0
Lipscomb U.	483	ne	ne	ne	73	0	28	0	45	0
Fort Valley State U.	484	102	88	104	72	0	72	0	0	0
Keene State C.	484	7	ne	91	72	0	72	0	0	0
U. Houston-Downtown	484	89	73	77	72	0	72	0	0	0
U. San Francisco	484	81	89	83	72	0	45	0	27	0
Manhattan C.	488	ne	ne	55	71	0	71	0	0	0
U. Baltimore	489	15	62	72	67	0	0	0	0	67
Eastern Washington U.	490	106	212	152	66	0	0	0	66	0
Northeastern Illinois U.	490	75	88	84	66	0	0	0	0	66
U. Nebraska, Omaha	492	310	223	169	62	2	2	0	58	0
U. of Mary Washington	492	ne	143	48	62	0	57	0	5	0
Alabama State U.	494	0	0	0	60	0	0	0	0	60
Pepperdine U.	495	67	109	88	56	0	54	0	2	0
U. South Florida, Saint Petersburg	495	46	0	61	56	0	56	0	0	0
U. Alaska, Southeast	497	0	0	0	55	55	0	0	0	0
U. Louisiana, Monroe	497	2	50	75	55	0	55	0	0	0
Albany State U.	499	78	137	150	54	0	54	0	0	0

TABLE 47

Higher education R&D expenditures in the physical sciences, ranked by all FY 2020 physical sciences: FYs 2017–20 and by subfield for FY 2020

(Dollars in thousands)

Institution	Rank	2017	2018	2019	2020					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Niagara U.	499	144	145	78	54	0	54	0	0	0
Stockton U.	499	ne	1	15	54	0	26	0	28	0
Minnesota State U., Mankato	502	654	121	127	52	0	48	0	4	0
U. Tennessee, Chattanooga	502	61	10	35	52	0	52	0	0	0
U. South Carolina, Aiken	504	8	108	0	51	0	51	0	0	0
Savannah State U.	505	157	63	63	50	0	0	0	0	50
St. Bonaventure U.	505	ne	ne	ne	50	0	50	0	0	0
Trinity C., Hartford	505	214	278	159	50	0	46	0	4	0
Pennsylvania State U., Behrend	508	112	98	151	44	0	22	0	22	0
Texas A&M International U.	509	70	12	4	42	0	0	0	38	4
California State U., Channel Islands	510	10	33	57	39	0	39	0	0	0
Kean U.	510	ne	ne	ne	39	0	39	0	0	0
Stephen F. Austin State U.	512	66	94	85	36	0	33	0	3	0
Northern Michigan U.	513	14	26	24	35	0	9	0	26	0
Saginaw Valley State U.	513	51	52	300	35	0	35	0	0	0
U. Texas, Tyler	515	41	33	44	33	0	33	0	0	0
Augusta U.	516	102	43	48	29	0	29	0	0	0
U. Michigan, Flint	516	135	53	40	29	0	21	0	8	0
Dickinson C.	518	108	ne	71	28	0	6	0	6	16
Lincoln U., Jefferson City	519	71	17	71	26	0	26	0	0	0
U. New England	519	20	27	23	26	0	20	6	0	0
U. Texas of the Permian Basin	521	57	103	ne	24	0	0	0	0	24
Midwestern State U.	522	ne	ne	ne	22	0	17	0	5	0
Pittsburg State U.	522	33	21	30	22	0	19	0	3	0
Monmouth U.	524	ne	ne	18	19	0	19	0	0	0
Colorado State U., Pueblo	525	ne	ne	6	18	0	18	0	0	0
California State U., Stanislaus	526	17	17	25	17	0	12	0	5	0
Austin Peay State U.	527	234	309	232	15	0	2	0	13	0

TABLE 47

Higher education R&D expenditures in the physical sciences, ranked by all FY 2020 physical sciences: FYs 2017–20 and by subfield for FY 2020

(Dollars in thousands)

Institution	Rank	2017	2018	2019	2020					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
St. Cloud State U.	527	33	23	12	15	1	3	0	11	0
U. Illinois, Springfield	529	0	0	12	14	0	14	0	0	0
Hofstra U.	530	62	42	48	10	4	4	0	2	0
Alfred U.	531	9	11	13	7	7	0	0	0	0
Columbus State U.	531	ne	ne	ne	7	0	7	0	0	0
Central State U.	533	37	83	63	6	0	6	0	0	0
Lawrence Technological U.	533	16	56	9	6	0	0	0	6	0
Gallaudet U.	535	136	227	26	5	0	5	0	0	0
U. Detroit Mercy	535	1	11	13	5	0	5	0	0	0
U. South Florida, Sarasota-Manatee	535	0	0	20	5	0	5	0	0	0
SUNY, Buffalo State	538	43	23	19	3	0	0	0	3	0
La Sierra U.	539	13	38	1	1	0	0	0	1	0
All other surveyed institutions	-	113,887	111,488	2,984	0	0	0	0	0	0

i = imputed. na = not applicable; institution did not exist or did not exist as a separate entity. ne = not eligible; institution did not meet the criteria for inclusion.

nec = not elsewhere classified.

^a Johns Hopkins University includes the Applied Physics Laboratory (APL), with \$353,757 thousand imputed for total R&D expenditures in physical sciences in FY 2020. Total expenditures by field for Johns Hopkins University are flagged as imputed because APL was unable to distribute a portion of institutionally funded R&D by field.

^b The University of Maryland includes expenditures from the University of Maryland, Baltimore and University of Maryland, College Park campuses. In FY 2019, the two campuses began reporting as one research unit to reflect their new strategic partnership. This relationship was codified through the University of Maryland Strategic Partnership Act passed by the Maryland General Assembly in 2016. Prior to FY 2019, both campuses reported to the survey as separate institutions.

^c The University of Tennessee, Knoxville includes expenditures from the University of Tennessee Institute of Agriculture. Due to a reorganization within the University of Tennessee system, the Institute of Agriculture now falls under the leadership of the University of Tennessee, Knoxville chancellor. Prior to FY 2020, the University of Tennessee, Knoxville, Institute of Agriculture reported to the survey separately.

Note(s):

Institutions reporting zero expenditures in ranked total for FY 2020 are not listed in this table. Tied institutions are ranked alphabetically. Ranked institutions are geographically separate campuses headed by a campus-level president or chancellor. Some campuses are part of large, multi-campus universities; some are part of state university systems. For a complete list of campuses that belong to a larger university or system and their aggregate R&D expenditures, see table 6.

Source(s):

National Center for Science and Engineering Statistics, Higher Education Research and Development Survey.