

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2021 physical sciences: FYs 2018–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2018	2019	2020	2021					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
All institutions	-	5,232,227	5,550,741	5,671,806	5,740,630	741,127	1,999,546	285,931	2,463,331	250,695
Johns Hopkins U. ^a	1	243,916	323,619	390,245	338,454	63,207	24,078	4,977	223,991	22,201
California Institute of Technology	2	188,604	188,041	217,581	212,265	49,083	37,366	25,102	100,714	0
Massachusetts Institute of Technology	3	124,145	136,601	153,044	170,494	33,094	37,408	6,657	57,207	36,128
Michigan State U.	4	169,148	151,159	154,318	167,520	65	12,568	0	154,887	0
U. California, Berkeley	5	130,883	130,895	141,434	156,896	71,360	41,402	79	33,755	10,300
U. Arizona	6	127,847	139,315	149,138	140,655	113,367	15,246	2,918	9,072	52
U. Colorado Boulder	7	84,938	107,416	115,340	120,677	34,368	9,383	0	70,498	6,428
Cornell U.	8	122,144	122,968	121,218	120,151	11,395	27,978	3,682	53,686	23,410
Harvard U.	9	84,054	94,515	100,654	109,606	11,658	37,078	0	59,910	960
U. Maryland ^b	10	na	102,720	105,718	101,322	37,980	9,419	1,990	42,274	9,659
U. Rochester	11	93,061	111,388	101,004	99,556	0	5,705	0	93,851	0
Princeton U.	12	82,329	88,235	94,815	99,326	27,282	29,163	6,744	35,249	888
Stanford U.	13	88,010	95,084	94,954	98,672	4,776	27,849	14,149	47,667	4,231
Pennsylvania State U., University Park and Hershey Medical Center	14	93,913	99,485	94,201	89,035	13,659	16,923	38,139	20,314	0
U. Wisconsin-Madison	15	73,381	75,231	83,687	87,587	5,556	33,896	0	26,135	22,000
U. California, San Diego	16	67,509	85,322	94,124	86,893	1,552	27,339	0	56,983	1,019
U. Texas, Austin	17	77,735	81,357	81,380	85,250	12,621	18,584	30,671	23,011	363
Northwestern U.	18	82,409	82,072	78,168	83,618	6,676	36,484	16,535	19,296	4,627
U. Illinois, Urbana-Champaign	19	69,612	69,531	72,360	78,698	9,377	35,360	0	33,961	0
U. California, San Francisco	20	63,010	65,942	69,662	69,817	0	68,492	0	1,325	0
U. Michigan, Ann Arbor	21	59,815	61,017	60,824	66,041	5,831	33,006	0	27,204	0
Florida State U.	22	67,753	61,706	68,454	63,481	738	20,686	3,270	38,309	478
U. Pennsylvania	23	55,476	60,150	58,157	59,246	1,305	23,124	14,089	20,728	0
U. Washington, Seattle	24	54,074	58,166	60,477	58,664	11,176	23,508	1,629	18,479	3,872
Yale U.	25	63,981	62,247	56,046	56,847	5,472	21,464	0	29,911	0
U. California, Los Angeles	26	55,568	60,067	54,697	56,624	0	24,038	0	30,227	2,359
Texas A&M U., College Station and Health Science Center	27	54,890	55,920	54,574	56,029	11,106	23,182	4,703	16,238	800
U. Chicago	28	51,285	52,656	51,122	55,032	9,618	24,034	5,628	15,752	0
U. California, Santa Barbara	29	49,160	65,929	58,534	54,435	4,379	8,346	14,586	26,695	429
U. Houston	30	32,572	43,378	50,164	52,230	85	43,502	322	7,385	936
U. Notre Dame	31	42,506	45,062	44,855	47,332	0	30,859	0	16,473	0

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2021 physical sciences: FYs 2018–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2018	2019	2020	2021					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Columbia U. in the City of New York	32	32,070	35,369	37,384	46,386	7,983	16,528	4,472	17,403	0
SUNY, Stony Brook U.	33	39,938	41,679	41,224	43,101	2,491	13,646	0	26,964	0
Purdue U., West Lafayette	34	37,542	38,081	42,370	42,663	0	26,272	0	16,391	0
U. Minnesota, Twin Cities	35	39,527	45,573	43,946	41,812	1,989	20,661	0	19,162	0
Ohio State U.	36	39,895	46,223	57,083	40,010	4,357	15,540	394	19,719	0
U. North Carolina, Chapel Hill	37	35,118	37,055	39,979	38,809	796	23,102	0	10,003	4,908
U. California, Irvine	38	37,914	40,872	40,964	38,794	0	18,924	0	19,684	186
U. Central Florida	39	27,810	30,415	34,493	37,144	0	4,027	0	33,116	1
U. California, Santa Cruz	40	29,547	32,576	36,262	35,606	17,827	10,689	0	6,919	171
Boston U.	41	29,879	30,805	30,909	35,094	2,256	17,695	0	15,143	0
Georgia Institute of Technology	42	37,983	38,229	34,215	33,914	0	22,555	0	11,359	0
Rice U.	43	29,448	34,759	33,656	33,015	2,183	15,332	1,034	14,466	0
U. Iowa	44	25,142	24,300	23,226	32,013	267	5,342	0	26,404	0
U. Utah	45	24,919 i	54,131 i	30,170 i	30,441 i	0 i	19,435 i	2,061 i	8,945 i	0 i
Indiana U., Bloomington	46	26,019	31,099	33,608	30,322	1,405	17,500	0	11,417	0
Vanderbilt U. and Vanderbilt U. Medical Center	47	29,053	28,951	28,017	30,077	0	16,401	0	13,676	0
North Carolina State U.	48	21,204	22,753	23,464	28,455	0	16,108	0	12,217	130
U. Florida	49	25,940	26,341	25,532	28,005	1,841	12,984	0	13,180	0
Florida International U.	50	18,688	24,968	27,354	27,997	0	22,439	0	5,218	340
U. Pittsburgh, Pittsburgh	51	30,869	30,196	27,652	27,919	3,695	15,518	0	8,706	0
U. California, Davis	52	23,212	26,589	26,495	27,906	0	14,017	0	9,032	4,857
U. Virginia, Charlottesville	53	25,154	26,742	27,628	27,304	3,780	12,853	0	10,671	0
Arizona State U.	54	24,779	26,050	25,619	26,742	0	11,762	0	14,980	0
Iowa State U.	55	42,277	40,040	27,216	26,696	0	11,950	0	14,746	0
New York U.	56	23,915	26,098	26,698	26,417	0	14,156	0	12,261	0
U. Hawaii, Manoa	57	23,775	27,285	29,491	26,381	19,460	1,722	0	4,291	908
Dartmouth C. and Dartmouth Hitchcock Medical Center	58	18,977	18,757	21,219	26,312	0	12,008	25	14,279	0
Washington State U.	59	31,387	32,628	24,243	26,256	166	13,478	1,598	10,978	36
U. Delaware	60	23,634	27,410	25,192	26,015	1,110	9,404	10,978	4,523	0
Emory U.	61	22,517	23,150	22,505	25,676	0	20,841	0	4,835	0
U. Nebraska, Lincoln	62	28,112	26,100	25,853	25,194	0	10,171	406	14,617	0
Virginia Polytechnic Institute and State U.	63	21,049	26,835	24,214	24,374	130	14,389	1,184	7,913	758
Washington U., Saint Louis	64	22,345	24,852	23,401	24,320	0	11,696	6,944	5,680	0

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2021 physical sciences: FYs 2018–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2018	2019	2020	2021					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Northeastern U.	65	17,483	19,445	20,709	24,279	0	8,833	0	15,248	198
Louisiana State U., Baton Rouge	66	24,133	23,944	22,366	23,438	0	10,020	0	12,979	439
Montana State U., Bozeman	67	10,912	15,021	17,990	23,329	0	13,389	0	9,940	0
Rutgers, State U. New Jersey, New Brunswick	68	26,313	29,660	25,703	23,111	1,730	5,579	2,320	13,193	289
U. Massachusetts, Amherst	69	24,443	31,623	28,757	22,250	4,116	10,139	0	7,995	0
Duke U.	70	19,322	21,176	22,396	22,131	0	11,536	0	10,595	0
U. Southern California	71	17,751	20,109	23,644	21,413	2	12,687	2,965	5,759	0
Carnegie Mellon U.	72	20,096	19,508	21,580	21,109	0	8,696	600	11,111	702
U. Tennessee, Knoxville ^c	73	24,307	25,677	21,239	20,809	0	6,532	0	14,277	0
New Mexico State U.	74	25,776	25,535	26,366	20,108	7,012	2,141	0	1,675	9,280
Wayne State U.	75	17,898	20,013	16,895	19,885	0	12,458	0	4,254	3,173
Catholic U. of America	76	19,319	17,660	17,669	19,708	185	101	0	13,988	5,434
U. Maryland, Baltimore County	77	13,821	17,039	18,278	19,202	13,537	2,106	690	2,869	0
U. Massachusetts, Lowell	78	14,184	17,976	19,144	18,308	0	5,555	0	12,753	0
Temple U.	79	15,235	16,205	18,447	17,979	0	9,251	0	6,242	2,486
U. Illinois, Chicago	80	12,602	14,456	15,752	17,718	0	9,326	0	8,392	0
U. Connecticut	81	16,816	16,829	18,546	17,682	0	4,998	7,202	5,482	0
Georgia State U.	82	17,221	17,836	19,395	17,588	3,653	9,032	0	4,705	198
U. Texas M. D. Anderson Cancer Center	83	15,858	19,017	19,060	17,572	0	0	0	17,572	0
U. California, Riverside	84	16,505	16,166	17,037	17,559	0	9,556	0	8,003	0
Brown U.	85	20,720	19,259	17,745	17,072	0	5,495	0	8,542	3,035
U. Texas, Arlington	86	16,067	15,590	17,257	16,864	0	5,631	0	10,373	860
U. Oklahoma, Norman and Health Science Center	87	14,899	15,362	18,739	16,497	0	10,051	0	6,446	0
U. Texas, Dallas	88	12,433	15,515	17,759	16,444	3,767	6,253	39	4,550	1,835
U. Alaska, Fairbanks	89	13,107	13,534	15,551	16,441	16,237	87	0	0	117
Air Force Institute of Technology	90	5,871	8,478	7,796	15,999	0	0	0	15,999	0
Texas Tech U.	91	15,455	14,408	15,103	15,784	0	7,686	545	7,553	0
U. Kansas	92	8,845	8,686	7,502	15,492	748	11,480	0	3,264	0
New Jersey Institute of Technology	93	13,042	15,338	16,781	15,415	7,655	2,846	761	4,153	0
Auburn U., Auburn	94	11,626	13,220	15,247	15,214	22	5,463	425	9,147	157
Brandeis U.	95	10,266	9,838	13,701	15,157	0	7,463	0	7,631	63
U. Alabama, Huntsville	96	14,459	12,963	13,353	15,071	11,601	1,165	0	2,284	21
U. Southern Mississippi	97	13,416	15,682	13,422	14,672	223	12,382	0	0	2,067

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2021 physical sciences: FYs 2018–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2018	2019	2020	2021					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
SUNY, Binghamton U.	98	20,446	14,920	18,586	14,568	0	10,445	0	4,123	0
Syracuse U.	99	13,242	15,894	13,905	13,926	0	4,742	0	9,184	0
U. Oregon	100	13,908	14,773	12,984	13,881	0	6,477	834	3,462	3,108
SUNY, U. Buffalo	101	13,301	11,644	11,161	13,431	0	10,122	26	3,283	0
Colorado State U., Fort Collins	102	13,908	14,464	11,356	12,947	0	8,806	737	2,956	448
Kansas State U.	103	13,475	14,413	12,583	12,736	0	3,977	0	8,759	0
West Virginia U.	104	15,392	14,339	12,678	12,431	3,035	4,509	0	4,887	0
Rochester Institute of Technology	105	12,578	18,059	13,830	12,388	0	492	0	3,585	8,311
Rensselaer Polytechnic Institute	106	14,662	15,038	12,143	12,251	0	6,355	444	2,883	2,569
Boston C.	107	8,313	9,572	9,306	11,863	0	8,543	0	3,320	0
U. Texas, San Antonio	108	11,561	10,617	11,234	11,547	0	7,037	0	4,510	0
U. Wisconsin-Milwaukee	109	14,409	11,076	8,699	10,970	5,967	1,679	0	3,324	0
U. Georgia	110	19,257	13,275	11,295	10,896	339	8,057	1	2,499	0
Colorado School of Mines	111	8,980	8,796	11,346	10,812	47	3,333	1,699	5,336	397
U. Mississippi	112	10,951	14,617	11,652	10,803	0	3,235	0	7,568	0
Mississippi State U.	113	10,131	11,312	10,381	10,755	5	4,790	2,117	3,675	168
U. Toledo	114	8,752	7,438	7,445	10,594	742	3,069	0	6,700	83
U. Nevada, Las Vegas	115	9,520	9,099	9,692	10,589	160	5,482	0	4,851	96
Georgetown U.	116	6,488	7,281	9,151	10,525	0	2,694	0	7,444	387
Clemson U.	117	12,320	11,401	10,823	10,139	0	3,121	107	5,915	996
North Dakota State U.	118	6,900	6,903	6,502	10,077	0	3,801	5,306	970	0
U. South Florida ^d	119	12,725	14,060	11,433	9,900	0	5,647	0	3,623	630
U. Alabama, Birmingham	120	7,211	5,961	4,678	9,885	0	2,415	5,131	2,339	0
Tufts U.	121	68,855	11,377	15,438	9,212	8	7,178	0	1,872	154
U. Cincinnati	122	9,056	9,641	8,874	9,189	0	5,987	0	3,202	0
U. Texas, El Paso	123	7,841	7,587	6,775	9,092	0	6,291	0	2,801	0
Kent State U.	124	6,597	7,744	8,381	9,048	45	2,387	3,441	2,378	797
Case Western Reserve U.	125	5,756	10,756	8,063	9,007	215	2,785	4,241	1,702	64
Oklahoma State U., Stillwater	126	8,503	8,458	9,784	8,824	0	4,341	0	4,483	0
U. Kentucky	127	7,069	8,173	8,553	8,722	0	5,598	0	3,124	0
U. Missouri, Columbia	127	13,985	10,286	9,173	8,722	0	5,501	0	3,221	0
U. North Texas, Denton	129	5,358	7,586	9,275	8,710	0	5,451	1	3,205	53
CUNY, City C.	130	10,496	9,935	9,591	8,709	0	4,978	0	3,553	178

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2021 physical sciences: FYs 2018–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2018	2019	2020	2021					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
U. Montana, Missoula	131	6,570	7,749	7,592	8,615	0	2,554	0	231	5,830
Xavier U. Louisiana	132	6,921	5,879	7,186	8,440	0	8,440	0	0	0
Baylor U.	133	6,994	6,891	6,993	8,289	24	5,111	15	2,955	184
Jackson State U.	134	8,859	9,159	9,903	8,231	0	7,071	0	1,160	0
Northern Arizona U.	135	3,763	5,643	7,064	8,120	4,786	780	1,051	858	645
U. Arkansas, Fayetteville	136	9,667	9,454	9,791	8,111	0	4,668	0	3,443	0
U. Nevada, Reno	137	11,017	10,153	9,566	8,025	44	3,935	34	2,947	1,065
U. Alabama, Tuscaloosa	138	7,501	5,815	6,471	7,991	133	3,853	0	4,005	0
U. California, Office of the President	139	13,253	7,973	8,123	7,905	7,905	0	0	0	0
California State U., Northridge	140	2,672	3,225	5,407	7,447	252	406	0	1,525	5,264
U. New Mexico	141	8,970	7,148	8,063	7,087	862	2,174	0	4,044	7
George Washington U.	142	7,191	7,634	8,313	7,033	0	3,281	0	3,752	0
Old Dominion U.	143	6,562	7,547	7,028	7,021	0	2,470	0	4,551	0
U. South Carolina, Columbia	144	7,025	7,007	4,651	6,928	0	2,682	0	3,050	1,196
Rockefeller U.	145	8,539	7,577	7,184	6,835	0	5,530	0	1,305	0
U. Maine	146	5,451	7,628	6,427	6,803	0	1,157	0	5,645	1
SUNY, U. Albany	147	7,858	7,811	7,719	6,791	0	4,814	0	1,977	0
U. Akron	148	10,305	9,643	8,576	6,703	0	6,703	0	0	0
San Diego State U.	149	5,873	6,333	6,402	6,681	701	4,386	0	1,594	0
U. Louisiana, Lafayette	150	3,011	1,369	3,546	6,453	103	1,029	1,879	3,442	0
Brigham Young U., Provo	151	4,905	5,854	5,268	6,357	0	4,020	0	2,337	0
CUNY, Advanced Science Research Center	152	747	2,983	4,154	6,107	0	1,617	0	4,490	0
William & Mary	153	5,219	6,554	5,781	5,985	0	494	0	5,491	0
Naval Postgraduate School	154	6,105	8,797	9,161	5,927	82	422	288	4,070	1,065
Boise State U.	155	3,737	3,358	3,788	5,881	197	745	4,808	131	0
U. California, Merced	156	6,260	7,307	7,593	5,753	0	2,919	0	2,344	490
Howard U.	157	4,058	5,277	5,308	5,720	0	5,000	0	720	0
Oakland U.	158	2,026	4,650	4,821	5,596	0	2,777	0	2,819	0
Ohio U.	159	5,358	4,501	5,370	5,520	0	1,432	0	4,088	0
CUNY, Hunter C.	160	4,500	4,739	4,197	5,489	62	4,412	0	1,015	0
Northern Illinois U.	161	6,446	6,106	5,560	5,454	0	1,579	0	3,875	0
Georgia Southern U.	162	842	692	5,465	5,400	94	1,951	2,940	415	0
California State U., Los Angeles	163	5,202	6,385	5,241	5,165	0	4,770	0	395	0

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2021 physical sciences: FYs 2018–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2018	2019	2020	2021					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Utah State U.	164	5,962	6,756	6,606	5,111	0	2,926	0	2,172	13
Tulane U.	165	5,732	6,448	5,720	5,018	0	2,227	0	2,791	0
U. Miami	166	5,861	5,567	5,150	5,000	0	1,318	0	3,682	0
U. New Hampshire	167	4,554	3,521	4,425	4,957	0	1,808	363	2,786	0
California Polytechnic State U., San Luis Obispo	168	1,884	7,589	5,672	4,953	0	460	0	1,757	2,736
U. Puerto Rico, Rio Piedras	169	3,739	5,127	4,429	4,886	0	2,967	0	1,919	0
George Mason U.	170	4,783	6,295	5,586	4,786	1,504	1,062	1,317	646	257
Oregon State U.	171	4,801	6,247	4,814	4,727	16	2,652	405	1,564	90
Southern Methodist U.	172	3,339	3,591	3,847	4,598	0	2,094	0	2,504	0
Missouri U. of Science and Technology	173	3,614	3,463	6,107	4,478	0	2,605	0	1,873	0
American U.	174	3,545	5,167	4,714	4,404	0	790	0	3,614	0
U. Vermont	175	2,297	3,235	4,877	4,354	0	3,250	0	1,104	0
U. Texas Rio Grande Valley	176	2,843	4,499	5,148	4,338	2,516	617	6	807	392
U. North Carolina, Greensboro	177	3,494	3,521	3,505	4,250	0	2,216	0	44	1,990
Abilene Christian U.	178	ne	ne	ne	4,209	0	0	0	4,209	0
U. Massachusetts, Boston	179	2,273	3,363	3,584	4,174	0	2,695	0	1,479	0
Michigan Technological U.	180	3,486	3,722	4,094	4,085	0	1,867	0	2,218	0
U. Denver	181	4,589	4,083	4,913	3,977	100	2,647	0	1,230	0
Miami U.	182	1,913	1,046	1,329	3,940	0	3,798	0	142	0
Marquette U.	183	2,789	2,517	2,681	3,903	0	3,476	0	427	0
Embry-Riddle Aeronautical U.	184	1,954	2,332	2,744	3,853	0	0	0	2,244	1,609
Worcester Polytechnic Institute	185	3,096	4,991	2,773	3,852	0	1,613	0	2,239	0
U. South Dakota	186	2,957	5,059	4,054	3,713	0	2,022	0	1,691	0
Lehigh U.	187	5,081	3,396	3,495	3,642	0	2,065	0	1,577	0
Florida Institute of Technology	188	2,253	2,078	2,777	3,547	465	466	0	2,513	103
Illinois Institute of Technology	189	3,843	3,609	3,143	3,483	0	334	39	3,110	0
San Jose State U.	190	1,649	2,041	2,445	3,437	7	2,097	0	1,301	32
Texas State U.	191	3,248	2,741	2,208	3,421	0	1,791	0	1,251	379
San Francisco State U.	192	3,734	3,088	3,208	3,418	341	1,871	242	927	37
Hampton U.	193	4,129	4,044	3,142	3,409	0	0	0	3,409	0
Virginia Commonwealth U.	194	3,607	3,469	3,499	3,396	0	2,017	0	1,379	0
U. Memphis	195	1,883	2,157	3,014	3,372	106	2,347	0	770	149
U. North Carolina, Charlotte	196	3,935	4,389	4,003	3,367	0	1,610	0	1,757	0

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2021 physical sciences: FYs 2018–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2018	2019	2020	2021					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
U. Rhode Island	197	3,713	3,194	3,869	3,328	0	1,957	0	20	1,351
North Carolina Central U.	198	3,575	2,774	3,027	3,257	0	656	0	2,601	0
U. Louisville	199	1,805	3,058	2,954	3,254	115	1,813	172	702	452
Villanova U.	200	2,248	2,743	3,573	3,095	719	1,884	0	492	0
Middle Tennessee State U.	201	388	417	596	2,967	43	2,632	0	292	0
U. North Dakota	202	3,119	3,607	3,489	2,964	0	2,152	0	812	0
Indiana U.-Purdue U., Indianapolis	203	2,132	2,396	2,306	2,748	0	2,262	0	486	0
Florida Atlantic U.	204	2,653	2,794	3,147	2,726	37	1,668	0	849	172
California State U., Long Beach	205	4,445	4,363	2,670	2,723	535	2,188	0	0	0
Rutgers, State U. New Jersey, Newark	206	2,162	1,978	2,384	2,667	0	2,296	0	371	0
U. New Orleans	207	1,939	2,144	2,398	2,652	0	1,903	0	749	0
U. Massachusetts, Dartmouth	208	1,208	1,755	2,116	2,650	0	1,934	0	716	0
California State U., East Bay	209	ne	ne	939	2,441	0	947	0	1,177	317
Clarkson U.	210	1,055	2,498	2,217	2,414	0	945	464	1,005	0
U.S. Air Force Academy	211	1,521	2,933	2,714	2,398	0	552	0	1,846	0
Bowling Green State U.	212	3,112	2,362	2,326	2,345	0	1,561	0	784	0
U. Missouri, Saint Louis	212	2,333	2,636	1,910	2,345	51	2,255	0	39	0
Haverford C.	214	1,195 i	2,039 i	2,581 i	2,342 i	346 i	357 i	1,552 i	87 i	0 i
Louisiana Tech U.	214	2,058	1,843	1,775	2,342	0	1,051	0	1,055	236
Delaware State U.	216	3,709	4,306	2,210 i	2,304	0	276	143	1,340	545
Wake Forest U.	217	1,755	3,071	2,196	2,236	0	1,010	146	1,080	0
Western Washington U.	218	1,322	1,183	1,323	2,191	513	1,218	460	0	0
Wesleyan U.	219	2,998	2,876	2,383	2,137	401	827	0	909	0
Saint Louis U.	220	1,685	2,384	1,942	2,131	0	2,120	0	11	0
Drexel U.	221	3,806	2,793	2,437	2,074	0	735	0	1,339	0
Stevens Institute of Technology	222	1,520	2,045	1,834	2,066	0	548	0	1,518	0
CUNY, Lehman C.	223	2,181	1,624	2,208	2,062	0	1,567	0	495	0
Southern Illinois U., Carbondale	224	3,163	1,619	2,013	2,052	0	1,441	0	537	74
Hope C.	225	1,859	1,843	1,315	2,032	0	1,238	0	615	179
California State U., San Bernardino	226	1,337	1,219	1,569	1,992	0	1,706	206	80	0
Portland State U.	227	3,450	2,911	2,326	1,977	0	1,646	14	317	0
South Dakota State U.	228	2,964	2,951	1,974	1,943	0	1,857	0	86	0
Central Michigan U.	229	2,426	2,908	2,508	1,891	187	52	0	1,651	1

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2021 physical sciences: FYs 2018–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2018	2019	2020	2021					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Mercer U.	230	1,694	2,189	2,038	1,878	0	1,786	0	92	0
Idaho State U.	231	4,490	3,709	1,372	1,847	0	959	3	885	0
Morehouse C.	232	2,740	1,704	1,517	1,831	0	298	0	146	1,387
James Madison U.	233	1,297	1,295	1,337	1,825	20	941	0	516	348
South Dakota School of Mines and Technology	234	1,848	1,602	1,425	1,824	0	681	0	1,143	0
CUNY, Queens C.	235	1,463	1,446	1,444	1,815	0	1,289	0	423	103
East Carolina U.	236	1,464	2,177	2,168	1,814	0	1,193	0	621	0
U. Wyoming	237	4,632	1,825	1,248	1,808	177	625	0	549	457
U. Idaho	238	1,871	2,030	1,539	1,646	609	683	108	246	0
Fisk U.	239	197	0	212	1,645	0	160	463	1,022	0
Creighton U.	240	1,381	i 1,691	i 1,463	i 1,621	i 0	i 670	i 0	i 951	i 0
Clark Atlanta U.	241	992	1,265	1,649	1,616	0	1,139	0	477	0
U.S. Naval Academy	242	2,173	2,794	2,144	1,604	0	603	0	1,001	0
U. Colorado Denver ^e	243	na	na	na	1,574	0	1,157	0	417	0
Rowan U.	244	1,056	1,190	664	1,524	0	676	0	752	96
Wright State U.	245	2,720	1,757	1,774	1,465	0	222	0	975	268
U. Missouri, Kansas City	246	2,168	2,026	1,680	1,451	128	353	0	897	73
Wichita State U.	247	649	947	1,114	1,438	0	1,095	0	0	343
Clark U.	248	664	889	1,648	1,386	0	317	0	1,069	0
U. San Diego	249	975	1,300	1,496	1,377	0	498	0	879	0
Southern Illinois U., Edwardsville	250	1,720	586	911	1,374	0	849	0	525	0
U. West Florida	251	472	696	1,202	1,356	0	515	0	0	841
Prairie View A&M U.	252	1,741	1,082	1,353	1,348	0	623	33	692	0
Florida A&M U.	253	6,083	3,488	1,410	1,346	0	23	0	1,323	0
California State U., Fullerton	254	1,156	1,180	1,254	1,343	702	159	34	448	0
CUNY, Brooklyn C.	255	1,240	1,067	i 1,105	1,325	0	1,127	0	198	0
Barnard C.	256	520	1,004	885	1,319	824	495	0	0	0
Chapman U.	257	1,280	1,816	2,062	1,314	0	247	0	88	979
California State U., Fresno	258	1,114	1,157	1,127	1,307	0	1,129	0	178	0
Grambling State U.	259	1,063	845	852	1,238	0	756	0	238	244
Williams C.	260	1,372	1,312	1,245	i 1,237	i 209	i 152	i 0	i 323	i 553
Western Kentucky U.	261	2,019	1,845	1,785	1,205	0	772	0	433	0
Amherst C.	262	1,500	2,374	1,534	1,203	i 53	i 580	i 0	i 570	i 0

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2021 physical sciences: FYs 2018–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2018	2019	2020	2021					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
SUNY, Geneseo	263	932	902	785	1,197	0	269	0	928	0
U. Arkansas, Pine Bluff	264	405	448	540	1,175	0	1,175	0	0	0
Illinois State U.	265	658	886	567	1,171	0	891	0	280	0
Texas Southern U.	266	196	211	1,204	1,168	0	801	0	199	168
Trinity U.	267	1,316	1,369	1,230	1,165	0	1,026	0	139	0
U. Alaska, Anchorage	268	17	16	184	1,160	144	984	0	32	0
North Carolina Agricultural and Technical State U.	269	1,808	1,889	1,638	1,158	0	248	0	910	0
New Mexico Institute of Mining and Technology	270	1,464	1,970	1,361	1,151	0	167	0	984	0
California State Polytechnic U., Pomona	271	1,701	693	1,395	1,150	905	205	0	40	0
Western Michigan U. and Homer Stryker M.D. School of Medicine	272	1,266	1,221	1,309	1,148	0	611	0	537	0
Kennesaw State U.	273	944	1,169	1,019	1,133	0	880	0	253	0
Bryn Mawr C.	274	1,285	1,057	1,423	1,119	0	657	0	462	0
Furman U.	275	1,146	983	925	1,114	0	1,105	0	9	0
Troy U.	276	ne	ne	1,216	1,102	0	0	1,102	0	0
St. Edward's U.	277	760	456	1,074	1,101	174	865	0	52	10
Texas A&M U.-Corpus Christi	278	356	1,362	1,437	1,089	0	268	70	0	751
U. Puerto Rico, Humacao	279	933	852	1,090	1,083	0	81	583	419	0
U. of the Virgin Islands	280	0	15	908	1,069	0	80	0	989	0
Fordham U.	281	68	868	747	1,067	0	1,067	0	0	0
California State U., San Marcos	282	1,106	901	1,667	1,063	0	33	0	339	691
U. Wisconsin-Eau Claire	283	716	930	814	1,041	19	577	428	17	0
Loyola U., Chicago	284	1,128	1,286	763	1,026	0	860	0	166	0
U. Puerto Rico, Mayaguez	285	1,739	1,172	1,347	1,002	0	616	0	386	0
South Carolina State U.	286	1,630	930	965	1,000	180	0	0	189	631
Long Island U.	287	60	198	784	996	0	845	0	151	0
Texas A&M U.-Commerce	288	1,125	883	939	995	0	212	0	783	0
C. Charleston	289	880	923	700	983	188	57	515	223	0
Cleveland State U.	290	1,318	1,372	1,547	976	0	549	0	427	0
U. Northern Iowa	291	731	1,289	911	966	0	841	0	125	0
Winston-Salem State U.	292	255	320	554	956	2	673	0	0	281
U. Dayton	293	1,579	1,247	868	910	0	194	205	511	0
Swarthmore C.	294	1,120	946	734	891	180	475	0	236	0

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2021 physical sciences: FYs 2018–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2018	2019	2020	2021					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Colgate U.	295	682	769	618	884	69	426	0	389	0
Tennessee Technological U.	296	1,491	1,289	1,178	879	0	374	0	504	1
Reed C.	297	374	623	886	866 i	0 i	738 i	0 i	128 i	0 i
Fort Lewis C.	298	ne	1	470	835	0	394	441	0	0
Ball State U.	299	700	993	834	826	0	667	0	65	94
Bucknell U.	300	650	538	872 i	816	275	456	0	85	0
Morgan State U.	301	116	34	411	774	0	389	0	385	0
Norfolk State U.	302	800	819	726	763	0	31	0	732	0
Occidental C.	303	355	424	414	762	0	535	0	111	116
Montclair State U.	304	256	260	589	737	29	689	0	19	0
Christopher Newport U.	305	386	758	829	731	0	26	0	705	0
U. Central Oklahoma	306	718	701	696 i	729 i	0 i	146 i	0 i	583 i	0 i
Towson U.	307	898	787	476	723	25	420	0	278	0
Grinnell C.	308	1,127	1,012	742	691	119	341	0	231	0
Skidmore C.	309	253	334	363	689	0	647	0	42	0
U. of the Sciences Philadelphia	310	730	644	580	686	0	652	0	34	0
U. Arkansas, Little Rock	311	905	926	1,105	685	0	685	0	0	0
U. Washington, Bothell	312	35	256	156	681	0	0	0	681	0
Northern Kentucky U.	313	490	701	778	671	15	497	0	159	0
Arkansas State U., Jonesboro	314	745	988	876	665	0	647	0	18	0
Franklin and Marshall C.	315	994	722	539	660	60	444	0	156	0
U. Nebraska, Kearney	316	230	652	320	657	0	630	0	16	11
Middlebury C.	317	418	459	429	648	155	201	0	276	16
Alabama A&M U.	318	1,257 i	932 i	636 i	627 i	0 i	297 i	0 i	330 i	0 i
U. South Alabama	319	278	471	433	626	0	589	0	37	0
U. Minnesota, Duluth	320	1,005	1,065	840	624	0	374	0	250	0
Duquesne U.	321	2,631	2,581	2,326	615	0	569	0	46	0
U. North Florida	322	568	524	682	608	0	446	0	162	0
Appalachian State U.	323	330	262	408	591	101	124	0	320	46
Southern U. and A&M C., Baton Rouge	324	1,556	1,167	735	583	0	133	0	450	0
Southern Connecticut State U.	325	622	430	846	576	390	38	0	91	57
New Mexico Highlands U.	326	714	ne	541	568 i	0 i	568 i	0 i	0 i	0 i
U. Central Arkansas	326	622	665	585	568	0	298	0	255	15

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2021 physical sciences: FYs 2018–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2018	2019	2020	2021					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
U. North Carolina, Asheville	328	313	680	958	558	41	86	0	0	431
Mount Holyoke C.	329	1,248	1,037	496	550	158	28	0	364	0
CUNY, Graduate Center	330	0	353	630	547	0	0	0	547	0
Carleton C.	331	640	723	704	531	37	244	0	250	0
Harvey Mudd C.	331	929	526	543	531	0	169	0	362	0
CUNY, C. Staten Island	333	1,547 i	1,657	860	525	0	282	0	242	1
Spelman C.	334	620	595	713	523	0	523	0	0	0
U. Maryland Center for Environmental Science	335	702	289	541	519	0	413	0	61	45
Santa Clara U.	336	792	423	487	516	0	368	0	148	0
Sam Houston State U.	337	390	550	481	503	0	333	0	170	0
Smith C.	338	433	499	321	495	29	246	0	220	0
U. Wisconsin-La Crosse	339	406	298	416	476	80	144	0	252	0
West Chester U. Pennsylvania	340	648	504	425	466	66	162	0	238	0
Calvin U.	341	542	462	441 i	458 i	0 i	321 i	0 i	137 i	0 i
Augustana U.	342	522	358	ne	457	0	159	0	298	0
U. Richmond	343	600	450	430	454	0	363	0	91	0
Davidson C.	344	333	352	242	451	0	162	0	107	182
Macalester C.	344	458	435	377	451	0	179	0	272	0
California State U., Bakersfield	346	6	420	91	447	0	447	0	0	0
Salisbury U.	347	128	534	212	440	0	392	0	48	0
Bowie State U.	348	293	246	272	438	0	389	0	0	49
Albion C.	349	273	380	422	435 i	18 i	207 i	0 i	86 i	124 i
Tennessee State U.	349	511	452	435	435 i	376 i	59 i	0 i	0 i	0 i
U. North Carolina, Wilmington	349	525	597	375	435	0	126	0	118	191
C. New Jersey	352	305	ne	366	423	0	184	0	239	0
California State U., Dominguez Hills	353	837	821	556	418	0	418	0	0	0
Bates C.	354	575	531	405	413	0	238	0	175	0
SUNY, C. of Environmental Science and Forestry	355	175	257	294	404	186	155	0	0	63
U. Tulsa	356	866	585	424	403	0	196	0	207	0
Texas Christian U.	357	784	690	695	398	57	168	0	173	0
Seton Hall U.	358	0	0	401	396	0	396	0	0	0
U. Colorado Anschutz Medical Campus ^e	359	na	na	na	391	0	0	0	391	0
U. Houston-Downtown	360	73	77	72	382	0	139	0	0	243

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2021 physical sciences: FYs 2018–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2018	2019	2020	2021					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Winthrop U.	360	358	443	317	382	0	161	221	0	0
Ithaca C.	362	ne	ne	378	379	160	172	0	47	0
Indiana U. Pennsylvania	363	208	269	425	364	0	175	0	189	0
Tarleton State U.	364	125	303	263	359	0	357	0	0	2
Tougaloo C.	364	848	849	361	359	0	278	0	81	0
Pomona C.	366	652	519	872	347	68	112	0	167	0
Missouri State U.	367	180	386	418	345	110	27	0	208	0
St. John's U., New York	367	311	273	405	345	0	344	0	1	0
U.S. Military Academy	369	120	35	814	338	0	150	44	144	0
Youngstown State U.	370	92	135	346	335	139	171	0	25	0
CUNY, New York City C. of Technology	371	48	350	212	331	0	5	0	326	0
SUNY, Oswego	372	538	388	314	328	0	282	0	46	0
Wellesley C.	373	1,240	1,426	391	327	0	277	0	23	27
U. New Haven	374	207	576	285	323	0	49	216	1	57
Rhode Island C.	375	130	132	361	320	0	0	0	0	320
Johnson C. Smith U.	376	228	66	300	318	0	318	0	0	0
U. Colorado Colorado Springs	377	472	217	270	310	0	57	0	185	68
California State U., Channel Islands	378	33	57	39	301	0	301	0	0	0
Pacific U.	379	878	962	120	299	10	268	0	21	0
Oberlin C.	380	616	485	483	298	0	157	0	141	0
U. of the Incarnate Word	380	602	418	226	298	0	238	0	60	0
Marshall U.	382	499	684	1,030	295	0	273	0	22	0
U. Wisconsin-Oshkosh	383	280	284	288	292	0	262	0	30	0
Sonoma State U.	384	ne	ne	203	289	0	268	0	0	21
Bowdoin C.	385	338	364	239	288	0	177	0	79	32
Lafayette C.	386	348	379	388	286	0	75	0	211	0
Central Washington U.	387	322	229	306	285	0	256	0	29	0
Pennsylvania State U., Behrend	388	98	151	44	282	0	61	204	17	0
Indiana U., South Bend	389	219	ne	ne	281	0	33	0	248	0
Connecticut C.	390	542	902	350	271	0	271	0	0	0
Loyola Marymount U.	391	266	423	233	269	0	218	0	51	0
Fort Hays State U.	392	ne	155	158	267	0	159	0	108	0
DePaul U.	393	243	229	305	258	0	47	0	211	0

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2021 physical sciences: FYs 2018–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2018	2019	2020	2021					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Framingham State U.	393	28	ne	247	258	0	258	0	0	0
CUNY, Baruch C.	395	293	375	297	256	0	0	0	256	0
Yeshiva U.	396	0	0	286	253	0	0	0	253	0
Dillard U.	397	797	606	975	252	0	0	47	205	0
Lewis and Clark C.	398	313	268	749	249	0	194	0	55	0
Keene State C.	399	ne	91	72	248	0	248	0	0	0
Grand Valley State U.	400	634	276	374	247	0	244	0	3	0
Southeastern Louisiana U.	400	304	106	326	247	0	140	0	107	0
Colby C.	402	512	397	391	245	0	180	0	65	0
C. Wooster	403	642	568	235	240	0	164	0	76	0
East Tennessee State U.	403	425	368	439	240	132	59	0	49	0
California State U., Sacramento	405	267	344	296	238	0	62	0	176	0
U. Houston-Clear Lake	406	676	520	403	236	0	27	0	0	209
CUNY, John Jay C. of Criminal Justice	407	329	222	507	235	0	165	0	0	70
Pace U.	408	349	199	138	226	0	226	0	0	0
U. of the Pacific	409	248	431	307	223	92	91	0	40	0
Drake U.	410	115	130	ne	221	0	0	0	221	0
Montana Technological U.	411	110	62	123	216	0	216	0	0	0
Texas A&M U.-Kingsville	412	83	196	164	213	0	180	0	33	0
Eastern Michigan U.	413	357	491	690	211	47	97	54	13	0
Azusa Pacific U.	414	332	179	205	207	0	129	0	78	0
Murray State U.	415	222	358	185	201	0	195	0	6	0
West Texas A&M U.	416	46	127	211	200	0	200	0	0	0
Florida Gulf Coast U.	417	0	138	397	197	0	197	0	0	0
Hamilton C.	418	238	198	208	193	0	73	0	40	80
CUNY, York C.	419	ne	883	568	192	0	61	0	131	0
Union C., Schenectady	420	309	609	268	185	20	150	0	6	9
Willamette U.	421	353	363	269	179	4	86	0	5	84
Vassar C.	422	773	172	250	178	0	57	0	121	0
Andrews U.	423	ne	184	196	174	174	0	0	0	0
Canisius C.	424	163	191	ne	173	0	0	0	0	173
Augusta U.	425	43	48	29	172	0	172	0	0	0
California State U., Chico	425	126	186	182	172	0	10	0	162	0

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2021 physical sciences: FYs 2018–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2018	2019	2020	2021					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Tuskegee U.	427	383	163	166	169	0	134	0	35	0
U. Michigan, Dearborn	427	107	217	135	169	0	0	0	0	169
U. of St. Thomas (MN)	429	234	360	235	168	0	126	0	42	0
Colorado C.	430	267	102	75	154	0	107	0	47	0
Texas A&M International U.	430	12	4	42	154	0	112	0	37	5
Hobart and William Smith Colleges	432	ne	263	175	152	0	31	0	116	5
U. Northern Colorado	433	236	110	122	149	43	82	0	24	0
Wheaton C., Wheaton	434	93	201	150	148	0	98	0	50	0
Fayetteville State U.	435	300	200	260	147	0	0	0	0	147
U. San Francisco	436	89	83	72	144	84	56	0	4	0
U. Ana G. Mendez, Gurabo	437	396	1,061	362	142	0	142	0	0	0
Hofstra U.	438	42	48	10	141	119	6	0	16	0
William Paterson U.	439	189	264	361	140	0	116	0	0	24
Saint Joseph's U.	440	284	508	194	137	0	105	0	32	0
SUNY, C. Plattsburgh	440	393	376	126	137	0	72	0	65	0
Claremont McKenna C.	442	40	144	144	136	21	56	0	59	0
Fairfield U.	443	95	442	153	134	0	52	0	63	19
Mercyhurst U.	443	ne	129	i 132	i 134	i 0	i 55	i 0	i 79	i 0
Eastern Kentucky U.	445	65	0	95	131	0	60	0	71	0
Clafin U.	446	600	508	258	129	0	104	0	25	0
U. Puerto Rico, Cayey	447	138	140	203	127	0	65	0	62	0
Doane U.	448	251	121	123	i 119	i 0	i 119	i 0	i 0	i 0
Lamar U.	449	158	188	80	115	0	66	0	49	0
Trinity C., Hartford	450	278	159	50	113	0	112	0	1	0
Manhattan C.	451	ne	55	71	112	0	112	0	0	0
U. Wisconsin-Green Bay	451	87	i 127	i 125	i 112	i 0	i 55	i 0	i 57	i 0
Pepperdine U.	453	109	88	56	111	0	101	0	10	0
Purdue U., Northwest	454	305	115	207	110	0	110	0	0	0
C. of Saint Benedict	455	179	i 176	i 167	i 108	i 0	i 75	i 1	i 32	i 0
Saint John's U.	455	141	i 139	i 132	i 108	i 0	i 76	i 0	i 32	i 0
U. Minnesota, Morris	455	ne	24	110	108	0	108	0	0	0
Black Hills State U.	458	414	407	116	103	0	0	0	94	9
SUNY, C. Brockport	458	4	48	74	103	26	66	0	11	0

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2021 physical sciences: FYs 2018–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2018	2019	2020	2021					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Albany State U.	460	137	150	54	102	0	102	0	0	0
U. of Mary Washington	461	143	48	62	100	0	68	0	32	0
Providence C.	462	175	93	390	99	25	74	0	0	0
Gallaudet U.	463	227	26	5	92	0	0	0	92	0
Purdue U., Fort Wayne	463	61	101	126	92	0	82	0	10	0
Humboldt State U.	465	127	201	193	90	0	64	12	14	0
Indiana State U.	466	168	155	160	89	0	33	0	56	0
Coastal Carolina U.	467	0	0	0	88	0	20	0	68	0
Marymount U.	467	ne	ne	ne	88	0	0	0	88	0
Seattle U.	469	208	157	165	86	0	2	0	84	0
U. Guam	469	0	0	0	86	86	0	0	0	0
Biola U.	471	78 i	82 i	85 i	85 i	0 i	33 i	0 i	52 i	0 i
California State U., Stanislaus	472	17	25	17	84	0	72	0	12	0
U. Wisconsin-River Falls	472	378	ne	330	84	0	48	0	36	0
St. Olaf C.	474	254	139	106	82	0	78	0	4	0
U. Wisconsin-Platteville	474	ne	99 i	101 i	82 i	0 i	43 i	0 i	39 i	0 i
Kettering U.	476	503	211	648	77	0	53	0	24	0
Citadel Military C. South Carolina	477	ne	ne	119	76	0	52	0	24	0
Fort Valley State U.	477	88	104	72	76	0	76	0	0	0
U. Nebraska, Omaha	477	223	169	62	76	0	3	0	73	0
Central Connecticut State U.	480	ne	118	82	73	0	66	0	7	0
Florida Polytechnic U.	481	ne	68	76	71	0	42	0	29	0
Suffolk U.	482	ne	ne	100	70	0	69	0	1	0
Western Illinois U.	483	12	57	78	68	0	52	0	16	0
Central State U.	484	83	63	6	67	0	16	0	51	0
U. Alaska, Southeast	484	0	0	55	67	67	0	0	0	0
U. Hawaii, Hilo	486	479	164	217	66	0	32	0	34	0
Sacred Heart U.	487	ne	ne	ne	64	64	0	0	0	0
Eastern Washington U.	488	212	152	66	63	0	0	0	63	0
U. Wisconsin-Stevens Point	489	79 i	92 i	105	61	0	45	0	16	0
Elon U.	490	146	89	83	59	0	38	0	21	0
Dakota State U.	491	13	5	0	58	0	0	0	58	0
California State U., Monterey Bay	492	0	65	0	57	0	57	0	0	0

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2021 physical sciences: FYs 2018–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2018	2019	2020	2021					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Lawrence Technological U.	493	56	9	6	55	0	1	0	54	0
Austin Peay State U.	494	309	232	15	50	0	0	0	50	0
U. Texas, Tyler	495	33	44	33	46	0	46	0	0	0
U. Baltimore	496	62	72	67	45	0	0	0	0	45
Western Carolina U.	496	196	342	253	45	0	45	0	0	0
Monmouth U.	498	ne	18	19	44	0	29	0	15	0
Niagara U.	499	145	78	54	42	0	42	0	0	0
Rutgers, State U. New Jersey, Camden	500	19	80	354	41	0	39	0	2	0
Saginaw Valley State U.	501	52	300	35	36	i	36	i	0	i
Northeastern Illinois U.	502	88	84	66	34	0	0	0	0	34
Savannah State U.	502	63	63	50	34	0	34	0	0	0
U. Texas of the Permian Basin	504	103	ne	24	30	0	0	0	0	30
Minnesota State U., Mankato	505	121	127	52	29	9	17	0	3	0
Stephen F. Austin State U.	505	94	85	36	29	0	28	0	1	0
Langston U.	507	40	i	37	109	28	0	0	0	28
Pittsburg State U.	508	21	30	22	24	0	24	0	0	0
U. Tennessee, Chattanooga	509	10	35	52	22	0	22	0	0	0
U. Illinois, Springfield	510	0	12	14	20	0	20	0	0	0
U. Virginia's C. Wise	510	ne	ne	ne	20	0	18	0	0	2
U. New England	512	27	23	26	19	0	17	0	0	2
Kean U.	513	ne	ne	39	18	0	0	0	0	18
Milwaukee School of Engineering	514	49	69	85	17	0	0	0	17	0
U. Louisiana, Monroe	514	50	75	55	17	0	17	0	0	0
U. Southern Maine	514	36	15	0	17	0	17	0	0	0
St. Cloud State U.	517	23	12	15	13	0	4	0	9	0
U. Michigan, Flint	518	53	40	29	12	0	6	0	6	0
Dordt U.	519	ne	ne	ne	11	0	0	0	11	0
Northern Michigan U.	520	26	24	35	10	0	7	0	3	0
U. South Carolina, Aiken	521	108	0	51	9	0	6	0	3	0
Colorado State U., Pueblo	522	ne	6	18	8	0	8	0	0	0
Texas Woman's U.	523	145	155	204	7	0	0	0	0	7
U. Detroit Mercy	524	11	13	5	6	0	6	0	0	0
Alfred U.	525	11	13	7	5	5	0	0	0	0

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2021 physical sciences: FYs 2018–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2018	2019	2020	2021					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Eastern Connecticut State U.	525	58	10	0	5	0	4	0	0	1
Morehead State U.	525	7	0	0	5	0	0	5	0	0
New York Institute of Technology	528	174	0	0	3	0	0	0	3	0
Roger Williams U.	529	331	154	101	2	0	2	0	0	0
U. North Georgia	529	71	68	91	2	2	0	0	0	0
La Sierra U.	531	38	1	1	1	0	0	0	1	0
All other surveyed institutions	-	119,340	9,190	5,425	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 \$301,358 thousand imputed for total R&D expenditures in physical sciences in FY 2021. 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.

^d The University of South Florida includes expenditures from the University of South Florida, Tampa; University of South Florida, Saint Petersburg; and University of South Florida, Sarasota-Manatee campuses. Due to the consolidation of the three campuses that occurred on 1 July 2020, University of South Florida, Saint Petersburg and University of South Florida, Sarasota-Manatee began reporting with the University of South Florida, Tampa as the University of South Florida. Prior to FY 2021, all three campuses reported to the survey as separate institutions.

^e The University of Colorado Denver and University of Colorado Anschutz Medical Center report to the survey separately. Prior to FY 2021, expenditures were reported together under University of Colorado Denver and Anschutz Medical Campus.

Note(s):

Institutions reporting zero expenditures in ranked total for FY 2021 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.