

TABLE 50

Total and federally financed higher education R&D expenditures in chemistry, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
All institutions	-	1,965,378	1,928,978	1,996,074	2,126,741	1,182,601	1,167,364	1,235,822	1,322,328
U. California, San Francisco	1	65,572	68,745	68,492	70,707	38,487	41,413	37,311	42,570
U. Houston	2	34,730	40,835	43,502	50,262	2,298	2,981	3,476	5,173
U. California, Berkeley	3	30,743	36,326	41,402	49,390	15,560	17,414	21,494	28,472
Northwestern U.	4	40,651	35,130	36,484	40,697	25,466	22,766	25,004	22,536
Harvard U.	5	34,683	33,675	37,078	37,601	20,722	19,149	22,149	20,608
California Institute of Technology	6	42,498	40,638	37,366	36,223	28,469	26,664	22,573	21,863
U. Wisconsin-Madison	7	26,369	31,441	33,896	36,183	17,502	19,249	22,131	23,999
Massachusetts Institute of Technology	8	31,179	32,375	37,408	35,819	18,377	19,258	22,959	22,375
U. California, San Diego	9	32,067	27,429	27,339	33,116	21,472	16,704	21,719	27,997
U. Michigan, Ann Arbor	10	29,977	31,361	33,006	32,418	19,168	18,164	19,179	20,011
U. North Carolina, Chapel Hill	11	24,143	22,546	23,102	31,221	16,280	15,780	16,230	22,796
U. Chicago	12	23,963	24,631	24,034	31,158	19,011	20,747	20,993	26,860
Purdue U., West Lafayette	13	22,763	22,953	26,272	30,984	11,830	12,344	14,122	16,510
U. Illinois, Urbana-Champaign	14	35,411	34,642	35,360	30,955	21,926	21,367	20,905	18,398
Cornell U.	15	26,542	27,423	27,978	30,250	19,679	21,016	19,666	22,442
Stanford U.	16	25,306	25,478	27,849	29,681	22,382	22,802	25,419	26,211
U. Notre Dame	17	28,342	29,216	30,859	29,610	17,970	18,246	19,720	18,107
Florida International U.	18	17,688	18,412	22,439	28,705	6,744	7,623	12,085	16,674
Princeton U.	19	22,317	25,095	29,163	28,604	11,066	13,611	13,984	13,432
U. Washington, Seattle	20	22,113	24,008	23,508	25,922	19,183	21,802	21,211	23,761
Texas A&M U., College Station and Health Science Center	21	24,066	24,507	23,182	25,693	7,711	8,781	8,988	11,112
Johns Hopkins U. ^a	22	24,180	25,946	24,078	25,673	22,678	24,462	22,938	22,992
U. Pennsylvania	23	20,121	21,246	23,124	25,511	12,441	13,345	15,115	17,415
Emory U.	24	20,261	19,048	20,841	24,772	13,433	12,627	15,197	14,402
Yale U.	25	23,452	21,309	21,464	23,376	14,079	10,663	12,340	16,105
U. Florida	26	12,084	10,773	12,984	22,973	6,722	6,769	7,415	9,638
Georgia Institute of Technology	27	25,802	22,323	22,555	22,397	17,973	15,235	15,425	15,762
U. California, Los Angeles	28	23,711	19,842	24,038	21,680	16,506	14,839	16,178	17,355
U. California, Irvine	29	22,169	21,988	18,924	21,156	16,378	15,738	12,676	15,716
U. Texas, Austin	30	15,321	16,470	18,584	20,895	7,452	8,614	7,913	8,569
Florida State U.	31	20,708	23,225	20,686	20,685	11,289	12,958	11,182	11,140
U. Minnesota, Twin Cities	32	21,094	22,061	20,661	19,860	14,112	14,721	15,439	13,989
U. Delaware	33	9,124	8,146	9,404	19,259	7,107	6,472	7,732	9,278
Indiana U., Bloomington	34	19,039	19,430	17,500	18,778	12,357	11,206	10,812	11,725

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Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
Columbia U. in the City of New York	35	11,749	11,983	16,528	17,944	8,577	9,611	14,024	14,752
Boston U.	36	13,712	14,230	17,695	17,896	8,686	9,210	11,004	10,572
Vanderbilt U. and Vanderbilt U. Medical Center	37	12,997	13,559	16,401	17,734	5,760	7,056	9,126	9,796
U. California, Davis	38	13,683	13,607	14,017	15,996	9,783	9,896	9,954	12,099
Michigan State U.	39	10,320	11,806	12,568	15,669	5,939	7,154	8,166	8,837
Pennsylvania State U., University Park and Hershey Medical Center	40	18,532	17,696	16,923	15,578	11,300	10,176	13,617	13,319
U. Pittsburgh, Pittsburgh	41	17,222	16,058	15,518	15,366	11,279	10,893	9,776	10,128
Iowa State U.	42	12,549	12,374	11,950	14,302	7,048	8,055	9,139	11,116
Virginia Polytechnic Institute and State U.	43	16,338	14,242	14,389	13,810	9,475	8,991	8,643	9,174
Wayne State U.	44	12,192	10,163	12,458	13,568	7,853	6,426	8,355	9,016
Rice U.	45	16,975	16,251	15,332	13,489	6,163	5,909	7,002	6,657
Ohio State U.	46	18,579	28,972	15,540	13,382	14,421	23,166	12,211	6,883
SUNY, Stony Brook U.	47	12,052	12,396	13,646	13,302	9,174	9,555	10,030	10,457
New York U.	48	14,483	13,753	14,156	13,103	12,540	11,679	12,181	10,225
Washington State U.	49	10,768	8,512	13,478	12,821	7,003	5,986	7,937	5,918
Duke U.	50	10,711	9,809	11,536	12,672	8,841	8,398	10,066	11,135
North Carolina State U.	51	10,796	11,821	16,108	12,623	5,718	6,645	7,120	7,854
Louisiana State U., Baton Rouge	52	8,558	8,252	10,020	12,606	4,312	3,955	5,423	4,636
U. Colorado Boulder	53	9,650	9,041	9,383	12,345	6,877	6,537	7,132	9,696
U. Virginia, Charlottesville	54	11,511	11,980	12,853	12,214	6,674	6,608	8,676	7,895
Washington U., Saint Louis	55	14,244	12,722	11,696	12,044	9,548	8,606	8,809	8,850
U. Southern Mississippi	56	13,266	11,328	12,382	11,978	9,050	8,520	11,026	11,271
U. Kansas	57	5,932	4,499	11,480	11,717	4,395	3,664	9,348	9,108
U. Southern California	58	14,258	14,232	12,687	11,475	7,884	7,570	6,787	7,494
Dartmouth C. and Dartmouth Hitchcock Medical Center	59	8,125	9,198	12,008	11,434	2,471	3,074	3,880	4,388
U. California, Santa Cruz	60	10,719	10,478	10,689	11,059	7,835	7,886	7,556	8,006
U. Nebraska, Lincoln	61	9,916	11,631	10,659	10,884	6,911	6,237	6,867	7,271
U. California, Riverside	62	9,249	9,260	9,556	10,604	7,019	7,396	8,133	9,452
U. Oklahoma, Norman and Health Science Center	63	11,836	12,342	10,051	10,525	9,760	8,392	5,844	6,981
Carnegie Mellon U.	64	8,868	9,207	8,696	10,492	3,818	4,095	3,985	5,091
U. Illinois, Chicago	65	8,664	7,868	9,326	10,467	5,362	4,659	6,060	6,233
Arizona State U.	66	14,026	13,030	11,762	10,253	5,870	5,739	5,232	4,492
SUNY, Binghamton U.	67	10,839	11,900	10,445	10,066	4,990	5,324	3,922	4,076
Colorado State U., Fort Collins	68	10,311	8,042	8,806	9,951	7,684	5,324	6,716	7,643
U. Arizona	69	13,060	14,511	15,246	9,869	7,735	8,089	7,395	6,142

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Northeastern U.	70	7,067	7,636	8,833	9,761	4,258	4,811	6,872	7,517
U. Utah	71	40,326 ⁱ	18,018 ⁱ	19,435 ⁱ	9,434	24,189	11,546	12,874	9,002
U. Massachusetts, Amherst	72	19,452	14,992	10,139	9,387	8,431	10,044	6,635	6,492
SUNY, U. Buffalo	73	7,311	7,461	10,122	9,376	4,716	4,783	5,756	6,337
Boston C.	74	7,188	7,492	8,543	8,931	5,597	5,627	6,600	7,144
Montana State U., Bozeman	75	7,838	8,796	13,389	8,821	5,448	5,606	9,290	5,469
U. Akron	76	9,571	8,576	6,703	8,686	3,992	4,238	4,026	4,811
Georgia State U.	77	8,366	9,304	9,032	8,645	5,085	6,834	5,193	4,929
U. Tennessee, Knoxville ^b	78	7,780	6,816	6,532	8,643	3,649	3,170	2,699	4,331
Texas Tech U.	79	7,368	7,136	7,686	8,441	2,760	2,780	2,622	2,315
U. California, Santa Barbara	80	17,290	9,166	8,346	8,424	10,287	6,268	6,502	5,850
U. Maryland ^c	81	9,888	10,389	9,419	8,290	7,246	6,777	6,858	5,326
Tufts U.	82	5,517	10,325	7,178	8,074	645	4,517	6,470	7,192
U. Texas, San Antonio	83	6,843	6,980	7,037	8,005	1,732	1,685	2,248	3,062
Rutgers, State U. New Jersey, New Brunswick	84	7,258	6,321	5,579	7,903	2,680	2,557	3,276	3,264
Temple U.	85	7,522	9,606	9,251	7,756	5,636	5,786	5,501	4,372
Rensselaer Polytechnic Institute	86	6,393	5,704	6,355	7,599	2,391	3,033	2,793	3,057
Baylor U.	87	3,877	3,921	5,111	7,587	785	945	1,464	2,103
Xavier U. Louisiana	88	5,878	7,186	8,440	7,491	5,796	7,077	8,325	7,426
Auburn U., Auburn	89	6,440	7,222	5,463	7,242	1,833	1,737	1,645	2,214
U. Cincinnati	90	5,968	5,796	5,987	7,085	2,241	2,005	2,173	3,145
U. Georgia	91	10,042	8,005	8,057	6,900	5,325	3,628	4,109	2,971
North Dakota State U.	92	3,713	3,106	3,801	6,880	1,889	1,349	2,245	5,516
Brandeis U.	93	2,287	4,239	4,505	6,801	1,819	1,679	2,257	4,076
U. Rochester	94	5,111	5,309	5,705	6,758	4,115	4,136	4,519	5,306
U. Oregon	95	5,867	4,910	6,477	6,752	3,621	3,937	4,686	5,429
U. Texas, El Paso	96	6,519	4,620	6,291	6,399	3,736	3,233	2,978	3,402
U. Iowa	97	4,659	5,415	5,342	6,339	3,607	3,681	4,065	4,215
U. Texas, Dallas	98	4,093	5,614	6,253	6,100	2,499	3,148	3,247	3,448
U. Missouri, Columbia	99	4,266	5,730	5,501	6,050	4,142	5,168	4,640	4,739
Brown U.	100	5,250	5,201	5,495	6,019	3,932	3,416	3,552	3,763
U. South Florida ^d	101	8,838	6,507	5,647	5,933	2,686	2,520	2,365	2,369
U. North Texas, Denton	102	4,069	5,586	5,451	5,788	1,143	1,107	1,596	2,139
U. Kentucky	103	5,236	4,802	5,598	5,609	4,073	3,669	4,627	4,657
CUNY, City C.	104	6,308	5,164	4,978	5,494	4,502	3,803	3,808	4,496

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U. Connecticut	105	4,713	5,868	4,998	5,492	3,005	3,515	3,316	4,189
U. Massachusetts, Lowell	106	4,105	4,475	5,555	5,369	469	1,064	1,387	1,527
U. Arkansas, Fayetteville	107	6,084	5,478	4,668	5,361	2,548	2,160	2,301	2,586
Howard U.	108	4,558	4,546	5,000	5,348	3,989	3,769	4,150	4,288
Jackson State U.	109	7,573	8,452	7,071	5,322	7,017	7,991	6,614	5,101
U. Nevada, Reno	110	4,373	3,903	3,935	5,281	2,004	1,534	2,370	3,227
West Virginia U.	111	5,632	4,868	4,509	5,184	3,616	3,040	2,965	3,118
San Diego State U.	112	4,203	4,075	4,386	5,180	2,655	2,297	2,214	3,490
Mississippi State U.	113	6,348	6,041	4,790	5,159	1,206	1,111	1,175	1,419
California State U., Los Angeles	114	5,640	4,602	4,770	5,055	4,197	3,633	3,691	4,219
U. Texas, Arlington	115	5,243	5,740	5,631	5,006	1,432	1,807	2,204	2,520
Syracuse U.	116	4,454	4,276	4,742	4,893	1,316	1,370	2,036	2,465
U. Central Florida	117	4,148	4,614	4,027	4,808	1,635	1,876	1,645	2,548
Rockefeller U.	118	4,970	4,720	5,530	4,727	2,287	2,299	3,233	1,998
U. Alabama, Tuscaloosa	119	3,315	2,937	3,853	4,643	2,435	2,148	2,222	2,995
Oakland U.	120	2,281	2,521	2,777	4,597	720	966	854	1,206
Oklahoma State U., Stillwater	121	4,804	5,180	4,341	4,588	1,971	1,513	1,179	1,536
SUNY, U. Albany	122	5,655	5,292	4,814	4,520	3,266	3,384	3,054	2,388
Clemson U.	123	5,030	4,327	3,121	4,367	2,985	2,337	1,749	3,076
U. Puerto Rico, Rio Piedras	124	2,488	2,776	2,967	3,842	2,217	2,360	2,650	3,384
U. Toledo	125	2,703	1,935	3,069	3,783	1,713	1,367	2,290	3,024
Georgetown U.	126	2,958	3,318	2,694	3,761	2,194	2,661	2,185	2,764
U. California, Merced	127	3,653	2,630	2,919	3,759	2,250	2,041	1,588	2,372
Colorado School of Mines	128	2,839	2,691	3,333	3,703	2,379	2,198	3,022	3,293
New Jersey Institute of Technology	129	3,128	3,891	2,846	3,690	553	939	836	757
Brigham Young U., Provo	130	3,158	3,234	4,020	3,638	2,617	2,457	2,487	2,836
U. Nevada, Las Vegas	131	4,910	5,140	5,482	3,601	2,991	2,828	2,582	2,869
Saint Louis U.	132	2,179	1,786	2,120	3,510	877	1,235	1,226	2,081
CUNY, Hunter C.	133	3,027	3,003	4,412	3,392	1,810	2,579	3,842	3,002
Kansas State U.	134	5,535	4,374	3,977	3,367	3,641	2,739	2,466	1,834
U. New Mexico	135	2,112	2,704	2,174	3,250	1,716	2,243	1,882	2,785
Old Dominion U.	136	2,838	2,297	2,470	3,241	1,654	1,091	1,123	1,609
U. Mississippi	137	6,256	3,994	3,235	3,218	3,890	2,225	2,022	1,945
California State U., Long Beach	138	3,453	2,474	2,188	3,191	3,327	2,328	2,059	2,420
Utah State U.	139	3,158	3,101	2,926	3,098	1,710	1,636	1,974	2,204

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Case Western Reserve U.	140	3,471	2,955	2,785	2,992	2,735	2,291	2,191	2,285
U. North Dakota	141	2,720	2,212	2,152	2,972	881	610	672	1,398
U. Vermont	142	2,438	2,415	3,250	2,951	1,279	1,327	1,445	1,649
U. Maryland, Baltimore County	143	1,714	1,558	2,106	2,934	824	1,233	1,723	1,987
U. Louisville	144	1,824	1,820	1,813	2,879	1,116	1,012	1,049	1,124
Clarkson U.	145	2,300	1,829	945	2,867	504	523	283	1,188
Northern Illinois U.	146	1,283	1,536	1,579	2,789	969	1,146	1,208	1,879
U. North Carolina, Greensboro	147	2,612	2,028	2,216	2,756	2,301	1,494	1,647	2,207
George Washington U.	148	3,526	3,976	3,281	2,735	2,256	1,769	1,974	1,968
Lehigh U.	149	2,201	2,147	2,065	2,679	1,312	1,298	1,432	1,702
U. Denver	150	2,818	3,314	2,647	2,670	2,110	2,435	1,834	1,891
Missouri U. of Science and Technology	151	2,446	2,315	2,605	2,572	1,462	1,833	1,769	2,243
CUNY, Advanced Science Research Center	152	478	1,376	1,617	2,563	430	922	1,160	1,760
Oregon State U.	153	3,811	2,788	2,652	2,537	3,214	2,560	2,444	1,595
Southern Methodist U.	154	1,691	1,469	2,094	2,480	798	921	1,154	1,216
U. Massachusetts, Dartmouth	155	1,314	1,601	1,934	2,435	152	200	444	363
Clark Atlanta U.	156	804	978	1,139	2,432	680	760	951	2,195
Rutgers, State U. New Jersey, Newark	157	1,869	1,976	2,296	2,414	1,412	1,175	1,704	1,979
Michigan Technological U.	158	1,507	1,925	1,867	2,382	288	642	695	1,095
U. South Dakota	159	2,741	2,499	2,022	2,380	756	992	726	623
Tulane U.	160	3,121	2,734	2,227	2,304	1,939	1,372	1,293	1,444
Miami U.	161	847	1,185	3,798	2,267	14	292	2,543	1,815
U. Rhode Island	162	2,020	2,081	1,957	2,246	1,682	1,726	1,344	1,629
Texas State U.	163	1,296	1,141	1,791	2,217	870	976	1,647	2,038
U. Montana, Missoula	164	3,363	2,782	2,554	2,183	2,351	1,783	1,655	1,560
New Mexico State U.	165	5,931	5,296	2,141	2,181	4,397	3,699	612	783
Portland State U.	166	2,667	1,782	1,646	2,161	2,222	1,467	1,145	1,524
Kent State U.	167	2,087	2,091	2,387	2,155	591	968	1,102	1,065
Marquette U.	168	2,202	2,361	3,476	2,127	1,222	1,424	2,323	1,324
San Jose State U.	169	1,541	1,787	2,097	2,077	1,310	1,420	1,303	1,146
California State U., Fresno	170	703	748	1,129	2,043	482	616	1,014	1,557
U. Memphis	170	1,579	2,143	2,347	2,043	809	667	733	625
California State U., San Bernardino	172	23	4	1,706	1,994	0	3	1,579	1,781
U. New Hampshire	173	1,625	1,428	1,808	1,966	740	818	655	825
CUNY, Lehman C.	174	1,495	1,698	1,567	1,954	1,495	1,612	1,551	1,928

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U. Massachusetts, Boston	175	1,983	2,370	2,695	1,923	1,193	1,706	1,796	1,343
U. Wyoming	176	933	554	625	1,894	915	554	614	814
Mercer U.	177	2,106	1,951	1,786	1,830	0	0	0	0
CUNY, Brooklyn C.	178	760	i 789	1,127	1,798	699	i 727	1,120	1,613
Western Washington U.	179	898	1,037	1,218	1,790	544	743	846	1,196
Bowling Green State U.	180	1,769	1,477	1,561	1,758	1,005	741	753	843
Indiana U.-Purdue U., Indianapolis	181	1,832	1,783	2,262	1,744	816	919	1,385	1,086
Virginia Commonwealth U.	182	2,383	2,250	2,017	1,734	1,442	1,293	1,356	1,370
Villanova U.	183	1,565	2,371	1,884	1,719	272	834	540	390
Middle Tennessee State U.	184	386	345	2,632	1,713	124	185	1,670	744
Prairie View A&M U.	185	299	421	623	1,708	182	392	622	1,708
San Francisco State U.	185	1,418	1,735	i 1,871	1,708	171	405	i 409	413
CUNY, Queens C.	187	893	955	1,289	1,698	846	870	1,197	1,135
Georgia Southern U.	188	444	1,476	1,951	1,691	118	534	523	324
Montclair State U.	189	245	507	689	1,645	106	224	437	762
Florida Atlantic U.	190	2,184	1,772	1,668	1,628	968	836	694	926
U. Miami	191	1,102	1,437	1,318	1,605	604	1,011	1,129	1,355
Kean U.	192	ne	39	0	1,576	ne	0	0	1
South Dakota State U.	193	2,898	1,941	1,857	1,562	1,213	1,026	1,365	1,267
U. Alabama, Birmingham	194	2,177	1,018	2,415	1,560	1,880	925	1,082	933
U. Wisconsin-Milwaukee	195	2,749	2,173	1,679	1,556	1,275	750	497	572
Fordham U.	196	333	747	1,067	1,532	107	294	251	642
Worcester Polytechnic Institute	197	1,722	1,422	1,613	1,523	1,481	1,021	1,035	925
U. Hawaii, Manoa	198	1,876	2,401	1,722	1,488	1,366	1,732	1,204	1,205
U. New Orleans	199	1,387	1,595	1,903	1,468	447	231	702	393
Southern Illinois U., Carbondale	200	901	1,318	1,441	1,393	592	934	824	721
Boise State U.	201	1,182	857	745	1,379	619	509	440	209
Wesleyan U.	202	960	776	827	1,377	395	487	525	819
Hope C.	203	520	615	1,238	1,338	226	204	752	618
U. North Carolina, Charlotte	204	1,585	1,261	1,610	1,335	1,207	977	1,267	1,057
U. Louisiana, Lafayette	205	162	1,256	1,029	1,327	160	158	82	63
Loyola U., Chicago	206	1,250	711	860	1,316	913	610	570	903
Saint Joseph's U.	207	208	128	105	1,280	0	0	0	456
East Carolina U.	208	1,586	1,354	1,193	1,266	688	830	986	946
Furman U.	209	981	913	1,105	1,252	556	357	522	767

TABLE 50

Total and federally financed higher education R&D expenditures in chemistry, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
George Mason U.	210	621	304	1,062	1,211	79	125	447	746
Marshall U.	211	679	1,019	273	1,198	462	99	143	1,065
U. Colorado Denver ^e	212	na	na	1,157	1,187	na	na	1,144	1,090
South Dakota School of Mines and Technology	213	504	732	681	1,174	485	691	639	834
U. Puerto Rico, Mayaguez	214	792	980	616	1,166	545	612	394	913
Trinity U.	215	1,175	1,012	1,026	1,126	452	543	471	520
Wichita State U.	216	715	945	1,095	1,125	656	756	593	665
Louisiana Tech U.	217	732	711	1,051	1,094	86	71	146	178
Ohio U.	218	492	1,399	1,432	1,055	219	582	1,073	647
U. Alabama, Huntsville	219	1,466	1,300	1,165	1,023	262	218	219	165
U. Missouri, Saint Louis	220	2,412	1,764	2,255	991	1,741	1,131	951	606
William & Mary	221	766	501	494	990	497	379	366	655
American U.	222	1,864	847	790	983	190	196	160	324
Ball State U.	223	963	801	667	970	576	315	428	458
Central State U.	224	63	6	16	954	63	6	16	954
James Madison U.	225	1,123	766	941	938	481	168	397	554
Kennesaw State U.	226	980	731	880	935	621	393	267	220
Illinois State U.	227	702	338	891	920	545	291	709	835
Morgan State U.	227	0	177	389	920	0	175	385	920
U. South Carolina, Columbia	229	1,394	724	2,682	899	1	0	0	0
Western Kentucky U.	230	1,287	1,360	772	888	664	783	401	462
Arkansas State U., Jonesboro	231	922	840	647	885	740	720	523	706
U. Maryland Center for Environmental Science	232	234	416	413	875	25	102	195	67
Barnard C.	233	606	341	495	846	561	276	432	736
U.S. Naval Academy	234	1,324	927	603	839	1,284	903	602	746
Grambling State U.	235	493	468	756	826	424	349	386	428
Creighton U.	236	734	626	670	816	302	277	310	434
U. Maine	237	2,171	1,160	1,157	762	810	220	128	41
U. Texas Rio Grande Valley	237	1,272	1,669	617	762	602	1,061	63	0
North Carolina A&T State U.	239	626	522	248	757	306	114	248	727
U. Northern Iowa	240	1,271	825	841	747	1,002	710	777	680
Amherst C.	241	1,062	782	580	743	21	289	35	88
Colgate U.	242	570	432	426	738	225	226	161	500
Texas Christian U.	243	306	377	168	732	106	213	167	136
Texas Southern U.	244	144	927	801	725	114	881	801	703

TABLE 50

Total and federally financed higher education R&D expenditures in chemistry, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
U. Idaho	245	1,068	613	683	719	501	51	127	112
Northern Kentucky U.	246	369	431	497	707	258	251	353	532
Bucknell U.	247	265	494	456	706	80	298	292	633
Winston-Salem State U.	248	193	437	673	704	193	410	590	586
Chicago State U.	249	842	ne	ne	690	842	ne	ne	688
Wake Forest U.	250	1,370	575	1,010	685	397	396	534	436
U. North Florida	251	345	485	446	684	248	286	252	258
Connecticut C.	252	902	350	271	678	384	113	97	229
Hampton U.	253	0	0	0	657	0	0	0	657
CUNY, C. Staten Island	254	880	311	282	637	651	228	239	537
Central Michigan U.	255	257	31	52	630	68	0	0	314
Cleveland State U.	256	733	761	549	628	211	307	122	225
California Polytechnic State U., San Luis Obispo	257	385	456	460	622	198	265	274	385
Long Island U.	258	20	675	845	616	0	0	69	96
Grinnell C.	259	626	625	341	611	22	352	5	7
Drexel U.	260	1,130	902	735	610	308	305	310	284
California State U., Dominguez Hills	261	781	531	418	608	603	390	317	426
Hofstra U.	262	6	4	6	606	0	0	0	538
Occidental C.	262	170	181	535	606	151	140	458	512
Rowan U.	264	614	388	676	605	422	213	613	462
Bryn Mawr C.	265	422	758	657	599	136	130	68	268
Seton Hall U.	266	0	401	396	592	0	401	396	571
Western Michigan U. and Homer Stryker M.D. School of Medicine	267	650	649	611	588	258	335	396	348
Reed C.	268	222	757	738	587	49	109	116	312
Texas Woman's U.	269	0	0	0	581	0	0	0	0
Franklin and Marshall C.	270	533	406	444	564	187	254	292	318
Clark U.	271	539	594	317	543	204	161	74	250
California State U., Northridge	272	366	666	406	514	315	612	274	283
U. Arkansas, Pine Bluff	273	448	540	1,175	513	352	418	895	296
Duquesne U.	274	2,446	2,204	569	506	669	621	392	358
St. John's U., New York	275	251	329	344	497	221	325	304	418
Utah Valley U.	276	ne	ne	ne	495	ne	ne	ne	178
Rochester Institute of Technology	277	651	522	492	494	395	382	246	304
SUNY, Geneseo	278	59	102	269	483	0	82	256	460
North Carolina Central U.	279	120	149	656	481	75	54	634	345

TABLE 50

Total and federally financed higher education R&D expenditures in chemistry, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
U. Nebraska, Kearney	280	493	281	630	468	146	118	130	74
Morehouse C.	281	116	177	298	463	116	177	298	463
Towson U.	282	218	246	420	455	110	120	168	184
U. South Alabama	283	471	407	589	454	355	338	464	373
California State U., Monterey Bay	284	65	0	57	446	65	0	57	431
Winthrop U.	285	287	150	161	444	100	64	95	350
Williams C.	286	165	156	152	442	0	0	0	154
California State U., Fullerton	287	213	166	159	440	7	0	6	138
Whitman C.	287	392	246	ne	440	301	164	ne	191
SUNY, Oswego	289	385	291	282	439	266	182	228	377
Skidmore C.	290	256	314	647	433	115	209	523	318
Pacific U.	291	189	71	268	431	114	0	207	346
U. Richmond	291	318	318	363	431	88	188	202	265
Santa Clara U.	293	337	342	368	426	313	315	310	397
Swarthmore C.	294	552	231	475	423	222	155	331	244
C. Wooster	295	389	160	311	422	151	91	229	331
Macalester C.	296	296	206	179	421	272	118	163	352
California State U., Channel Islands	297	57	39	301	406	54	0	73	77
Pomona C.	298	304	446	112	403	132	212	64	305
U. Wisconsin-Eau Claire	299	463	457	577	400	388	355	500	351
Haverford C.	300	315	394	357	393	201	187	273	286
Spelman C.	301	595	713	523	391	595	713	523	391
St. Edward's U.	301	272	750	865	391	250	735	850	271
Southeastern Louisiana U.	303	81	213	140	388	28	135	107	145
Chapman U.	304	584	370	247	385	334	362	157	342
Loyola Marymount U.	305	369	231	218	383	132	140	104	99
Naval Postgraduate School	306	104	348	422	379	104	234	422	379
U. Tulsa	307	317	261	196	376	21	43	22	243
Montana Technological U.	308	62	123	216	375	54	97	133	309
U. San Diego	308	727	578	498	375	575	341	256	171
Appalachian State U.	310	108	226	124	372	78	74	5	43
Tarleton State U.	311	227	257	357	365	0	0	0	0
California State U., East Bay	312	ne	296	359	364	ne	164	242	248
Idaho State U.	312	583	564	959	364	505	429	628	187
U. Wisconsin-Oshkosh	314	259	261	262	360	225	224	222	316

TABLE 50

Total and federally financed higher education R&D expenditures in chemistry, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
Illinois Institute of Technology	315	293	319	334	353	281	296	257	188
Eastern Michigan U.	316	176	410	97	348	0	1	28	25
Alabama A&M U.	317	447 i	305 i	314 i	344 i	325 i	222 i	269 i	334 i
U. Dayton	317	8	8	194	344	0	0	108	148
Smith C.	319	242	217	246	342	151	167	97	234
Tougaloo C.	320	849	280	278 i	340 i	849	280	278 i	340 i
U. Missouri, Kansas City	321	347	591	353	333	182	273	236	223
Delaware State U.	322	590	240 i	276	328	457	240 i	276	0
California State U., Bakersfield	323	94	91	447	322	0	29	159	105
Texas A&M U.-Kingsville	324	148	163	180	319	83	108	87	60
U. of St. Thomas (MN)	324	338	94	126	319	42	49	58	52
SUNY, C. of Environmental Science and Forestry	326	243	94	155	309 i	42	47	115	263
Grand Valley State U.	327	243	364	244	305	219	341	172	247
U. Central Oklahoma	328	140	139 i	146 i	302 i	140	139 i	146 i	111 i
U. of the Incarnate Word	329	224	226	238	299	178	176	238	228
Calvin U.	330	325	252 i	275 i	298 i	265	202 i	202 i	203
U. South Carolina, Aiken	331	0	51	6	292	0	8	4	8
California State Polytechnic U., Pomona	332	17	110	205	289	17	108	160	225
Colby C.	333	330	302	180	287	260	225	143	147
Northern Arizona U.	333	1,387	799	780	287	271	324	270	99
Middlebury C.	335	245	253	201	286	213	238	201	286
U. Minnesota, Duluth	336	828	717	374	285	302	286	162	163
U. Arkansas, Little Rock	337	896	1,088	685	279	614	828	590	271
Salisbury U.	338	521	169	392	278	335	21	148	40
Rutgers, State U. New Jersey, Camden	339	74	322	39	269	0	0	0	13
Augusta U.	340	48	29	172	266	0	0	0	187
Davidson C.	340	282	154	162	266	225	112	138	107
U. Central Arkansas	342	476	505	298	265	440	414	184	141
Colorado C.	343	83	38	107	263	0	0	0	178
Texas A&M U.-Corpus Christi	344	645	181	268	261	414	107	59	46
U. Alaska, Anchorage	345	15	59	984	260	15	59	898	94
West Texas A&M U.	346	121	211	200	258	71	166	169	218
Lafayette C.	347	176	156	75	248	151	94	37	201
U. Louisiana, Monroe	348	75	55	17	247	67	55	10	125
Murray State U.	349	337	165	195	240	328	155	141	205

TABLE 50

Total and federally financed higher education R&D expenditures in chemistry, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
Framingham State U.	350	ne	247	258 i	238 i	ne	169	177 i	31 i
Indiana U. Pennsylvania	350	143	207	175	238	46	93	84	132
Bowdoin C.	352	79	77	177	236	71	43	158	202
Southern Connecticut State U.	353	98	118	38	219	0	0	0	0
Sul Ross State U.	353	0	0	0 i	219 i	0	0	0 i	76 i
U. Colorado Colorado Springs	353	0	0	57	219	0	0	57	149
Vassar C.	353	38	18	57	219	38	13	49	61
Florida Institute of Technology	357	448	469	466	218	180	154	204	48
U. North Carolina, Asheville	357	13	180	86	218	0	146	33	179
Wellesley C.	359	487	283	277	208	367	251	263	157
Florida Gulf Coast U.	360	22	257	197	207	0	204	106	166
Youngstown State U.	361	101	182	171	204	87	166	158	194
Purdue U., Northwest	362	115	207	110	202	111	168	102	160
Tennessee Technological U.	363	653	583	374	201	498	426	270	128
U. Wisconsin-La Crosse	364	249	228	144	194	69	54	0	1
CUNY, John Jay C. of Criminal Justice	365	158	220	165	191	158	167	165	185
CUNY, New York City C. of Technology	366	1	0	5	187	1	0	5	187
Carleton C.	367	382	488	244	183	114	142	110	157
Lewis and Clark C.	368	127	151	194	180	45	53	55	127
Texas A&M U.-Commerce	369	240	129	212	175	136	58	156	150
C. New Jersey	370	ne	54	184	169	ne	48	118	110
Sam Houston State U.	371	472	407	333	168	351	342	151	77
CUNY, York C.	372	448	331	61	167	437	329	61	152
Southern Illinois U., Edwardsville	373	502	911	849	165	306	231	193	100
Ithaca C.	374	ne	76	172	161	ne	70	101	135
Harvey Mudd C.	375	217	259	169	155	88	201	109	55
Texas A&M International U.	375	1	0	112	155	0	0	64	66
Butler U.	377	ne	ne	ne	154	ne	ne	ne	105
New Mexico Institute of Mining and Technology	378	450	287	167	149	450	287	167	102
U. West Florida	379	166	88	515	146	0	0	392	0
Trinity C., Hartford	380	154	46	112	143	92	5	86	85
Augustana U.	381	158	ne	159	141	153	ne	159	141
Manhattan C.	382	55	71	112	140	55	71	112	140
U. North Carolina, Wilmington	382	458	208	126	140	374	169	110	99
California State U., Sacramento	384	183	89	62	133	102	44	5	63

TABLE 50

Total and federally financed higher education R&D expenditures in chemistry, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
Southern U. and A&M C., Baton Rouge	385	451	101	133	132	73	39	65	118
Stevens Institute of Technology	386	0	10	548	127	0	0	258	69
East Tennessee State U.	387	78 i	91 i	59 i	126 i	11	27	1	0
U. Wisconsin-Stevens Point	388	55 i	62	45	124	36 i	42	7	86
U. of the Pacific	389	257	144	91	123	257	144	91	123
U. Hawaii, Hilo	390	17	179	32	119	12	178	31	111
Fisk U.	391	0	0	160	116	0	0	158	116
Stephen F. Austin State U.	392	85	33	28	112	0	0	0	0
Azusa Pacific U.	393	98	137	129	111	0	12	9	6
California State U., Stanislaus	394	20	12	72	108	0	0	60	101
Union C., Schenectady	394	408	38	150	108	352	21	96	56
Seattle U.	396	84	86	2	105	0	0	0	0
Citadel Military C. South Carolina	397	ne	23	52	104	ne	0	0	9
New Mexico Highlands U.	397	ne	541	568 i	104 i	ne	541	568 i	102 i
Hobart and William Smith Colleges	399	92	30	31	102	17	0	0	6
Central Connecticut State U.	400	101	78	66	101	78	60	41	64
Albion C.	401	123	204	207 i	99 i	0	92	98 i	29 i
Hamilton C.	401	82	164	73	99	0	0	0	33
William Paterson U.	403	229	267	116	98	0	0	0	0
Tuskegee U.	404	131	134	134	97	131	134	134	97
Virginia Military Institute	405	ne	ne	ne	95	ne	ne	ne	55
Pace U.	406	152	138	226	93	0	0	0	31
Wright State U.	407	384	390	222	91	183	221	153	49
Saint John's U.	408	104 i	99 i	76 i	88 i	0 i	0 i	0 i	0 i
C. of Saint Benedict	409	137 i	130 i	75 i	87 i	21 i	20 i	6 i	7 i
Abilene Christian U.	410	ne	ne	0	85	ne	ne	0	0
U. Puget Sound	410	ne	156	ne	85	ne	124	ne	60
Fort Valley State U.	412	104	72	76	83	104	72	76	83
Claremont McKenna C.	413	144	85	56	81	140	85	56	81
Virginia State U.	414	0	0	0	80	0	0	0	80
West Chester U. Pennsylvania	415	262	255	162	79	62	35	56	17
Bates C.	416	209	211	238	78	166	185	190	49
U. of Mary Washington	416	32	57	68	78	32	49	50	56
U. Wisconsin-Green Bay	418	63 i	62 i	55 i	77 i	30 i	33 i	30 i	36 i
Clafin U.	419	501	208	104	75	501	208	104	75

TABLE 50

Total and federally financed higher education R&D expenditures in chemistry, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
California State Polytechnic U., Humboldt	420	48	39	64	74	0	0	0	0
U.S. Air Force Academy	420	330	0	552	74	330	0	552	54
Lamar U.	422	128	54	66	71	73	20	0	0
Pennsylvania State U., Behrend	423	76	22	61	70	17	16	26	32
Pepperdine U.	424	77	54	101	68	0	0	0	0
U. Alaska, Fairbanks	425	75	57	87	67	48	57	87	67
Missouri State U.	426	7	22	27	65	7	20	0	0
Sonoma State U.	427	ne	88	268	62	ne	8	188	28
Purdue U., Fort Wayne	428	101	123	82	61	101	123	82	56
Willamette U.	429	271	161	86	60	149	62	4	0
California State U., Chico	430	30	26	10	59	16	6	4	51
Coastal Carolina U.	431	0	0	20	55	0	0	0	0
U. San Francisco	431	55	45	56	55	0	0	0	0
C. Charleston	433	200	131	57	54	154	88	26	29
Savannah State U.	434	63	0	34	53	63	0	34	53
U. Wisconsin-Platteville	435	99 i	101 i	43 i	51 i	36 i	36 i	21 i	26 i
U. Puerto Rico, Humacao	436	157	200	81	50	104	192	71	50
Christopher Newport U.	437	102	63	26	48	64	53	20	43
Western Illinois U.	438	38	39	52	47	17	21	47	47
Suffolk U.	439	ne	97	69	45	ne	97	69	45
California Lutheran U.	440	81	95	ne	42	36	59	ne	42
Northern Michigan U.	440	24	9	7	42	0	0	0	0
Central Washington U.	442	51	197	256	41	12	152	186	20
U. Tennessee, Chattanooga	443	35	52	22	40	0	0	0	0
Fort Lewis C.	444	1	44	394	38	0	9	345	32
SUNY, C. Brockport	444	33	69	66	38	0	39	19	30
U. Houston-Downtown	446	77	72	139	35	0	0	65	0
U. Ana G. Mendez, Gurabo	447	1,007	362	142	33 i	29 i	25	29	33 i
CUNY, Baruch C.	448	0	21	0	32	0	21	0	32
Kenyon C.	448	34	9	ne	32	0	0	ne	0
U.S. Military Academy	450	0	419	150	30	0	419	150	23
U. Texas, Tyler	451	44	33	46	29	0	0	0	0
Pittsburg State U.	452	28	19	24	27	28	19	24	27
Elon U.	453	40	39	38	26	0	0	0	0
Indiana State U.	453	62	39	33	26	62	39	30	11

TABLE 50

Total and federally financed higher education R&D expenditures in chemistry, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
U. Nebraska, Omaha	453	2	2	3	26	0	0	0	0
California State U., San Marcos	456	118	61	33	23	118	61	33	23
Mount Holyoke C.	456	210	114	28	23	183	111	18	0
U. Virginia's C. Wise	456	ne	ne	18	23	ne	ne	18	23
Lake Superior State U.	459	ne	ne	ne	21	ne	ne	ne	0
Minnesota State U., Mankato	459	51	48	17	21	18	0	0	11
Catholic U. of America	461	551	659	101	18	481	523	84	12
Roger Williams U.	462	15	3	2	17	0	0	0	14
U. Northern Colorado	463	71	53	82	15	0	0	61	3
Florida A&M U.	464	25	39	23	14	21	39	23	13
U. Illinois, Springfield	464	12	14	20	14	12	12	15	14
U. New England	464	23	20	17	14	0	0	0	0
DePaul U.	467	42	38	47	13	1	2	24	0
SUNY, C. Plattsburgh	467	7	0	72	13	0	0	66	13
U. North Georgia	467	64	0	0	13	52	0	0	13
Monmouth U.	470	18	19	29	11	0	0	0	0
Morehead State U.	471	0	0	0	10	0	0	0	0
Drake U.	472	13	ne	0	9	9	ne	0	0
U. New Haven	473	264	122	49	8	1	0	0	0
East Stroudsburg U. Pennsylvania	474	ne	ne	ne	7	ne	ne	ne	0
Pennsylvania State U., Harrisburg	474	0	0	0	7	0	0	0	7
U. Texas of the Permian Basin	476	ne	0	0	6	ne	0	0	0
St. Cloud State U.	477	1	3	4	5	0	0	0	0
Eastern Connecticut State U.	478	10	0	4	4	0	0	0	0
Florida Polytechnic U.	478	0	17	42	4	0	0	0	0
Johnson C. Smith U.	478	66	300	4 i	4	66	300	4 i	4
U. Hartford	478	0	0	0	4	0	0	0	0
St. Catherine U.	482	ne	ne	ne	3	ne	ne	ne	0
Marymount U.	483	ne	ne	0	2	ne	ne	0	0
U. Puerto Rico, Cayey	483	83	155	65	2	83	137	65	2
All other surveyed institutions	-	7,830	5,467	2,658	0	5,680	3,897	1,680	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.

^a Johns Hopkins University includes the Applied Physics Laboratory (APL), with \$14,118 thousand imputed for total and \$12,413 thousand reported for federally financed R&D expenditures in chemistry in FY 2022. 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 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.

^c 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.

^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 2022 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.