



Barcelona, Spain

Barcelona is the second-ranked cluster, out of 2 Spanish clusters, that falls within the top 100 S&T clusters in 2023. It filed **480 PCT applications** and published **5,899 scientific articles**, both per 1 million inhabitants over the last five years, making it the:

54th largest science and technology cluster in 2023 (down two spots from 2022)

76th S&T cluster by intensity (relative to population density) in 2023 (unchanged from 2022)

Top PCT applicants

		Patents	Share
1	Hewlett-Packard	791	33%
2	Consejo Superior de Investigaciones Cientificas (Csic)	39	2%
3	Universitat Politecnica de Catalunya	36	2%

Top publishing organizations

		Articles	Share
1	University of Barcelona	4,820	16%
2	Autonomous University of Barcelona	3,293	11%
3	Polytechnic University of Catalonia	3,289	11%

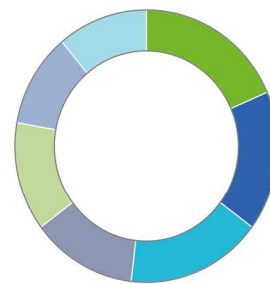
Top technology fields in Barcelona

Patents



Other machines (15%)	Computer tech. (6%)
Textile and paper machines (13%)	Handling (5%)
Pharma (10%)	Organic fine chem. (4%)
Medical tech. (8%)	

Publications



Technology (10%)	Biochem. & biotech. (7%)
Chemistry (9%)	Clinical medicine (6%)
Physics & math (9%)	Engineering (6%)
Earth sciences (7%)	

23% of Barcelona's PCT patent applications are filed in collaboration with other inventors, with **San Jose-San Francisco, Portland** and **Madrid** emerging as the top collaborative locations.

67% of Barcelona's scientific articles are published in collaboration with other organizations, with the top three collaborating locations being **Madrid, London** and **Paris**.