



Shenzhen–Hong Kong–Guangzhou

Shenzhen–Hong Kong–Guangzhou is a multi-cluster spanning an area around China and Hong-Kong, China. It filed **2,291 PCT applications** and published **3,092 scientific articles**, both per 1 million inhabitants over the last five years, making it the:

2nd largest science and technology cluster in 2023 (unchanged from 2022)

32nd S&T cluster by intensity (relative to population density) in 2023 (up five spots from 2022)

Top PCT applicants

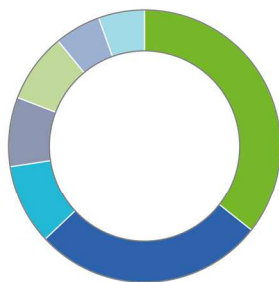
		Patents	Share
1	Huawei	25,673	23%
2	Oppo	8,341	7%
3	Zte	6,451	6%

Top publishing organizations

		Articles	Share
1	Sun Yat Sen University	20,466	13%
2	South China University of Technology	14,775	10%
3	Shenzhen University	8,047	5%

Top technology fields in Shenzhen–Hong Kong–Guangzhou

Patents



■ Digital coms. (26%)	■ Electrical machinery (6%)
■ Computer tech. (20%)	■ Measurement (4%)
■ Audio-visual tech. (7%)	■ Optics (4%)
■ Telecoms (6%)	

Publications



■ Chemistry (18%)	■ Biochem. & biotech. (9%)
■ Engineering (12%)	■ Clinical medicine (6%)
■ Technology (11%)	■ Earth sciences (5%)
■ Physics & math (9%)	

3% of Shenzhen–Hong Kong–Guangzhou’s PCT patent applications are filed in collaboration with other inventors, with **Beijing**, **Shanghai–Suzhou** and **Melbourne** emerging as the top collaborative locations.

63% of Shenzhen–Hong Kong–Guangzhou’s scientific articles are published in collaboration with other organizations, with the top three collaborating locations being **Beijing**, **Shanghai–Suzhou** and **Wuhan**.