



Changchun, China

Changchun is the sixteenth-ranked cluster, out of 24 Chinese clusters, that falls within the top 100 S&T clusters in 2023. It filed **104 PCT applications** and published **10,294 scientific articles**, both per 1 million inhabitants over the last five years, making it the:

58th largest science and technology cluster in 2023 (up five spots from 2022)

55th S&T cluster by intensity (relative to population density) in 2023 (up five spots from 2022)

Top PCT applicants

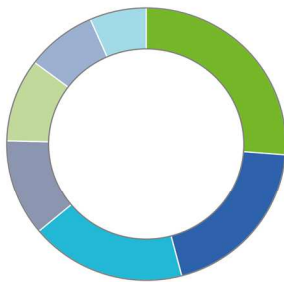
		Patents	Share
1	Crrc Changchun Railway Vehicles Co., Ltd.	86	23%
2	Jilin University	37	10%
3	Ciomp	31	8%

Top publishing organizations

		Articles	Share
1	Jilin University	21,334	57%
2	Northeast Normal University - China	3,535	9%
3	Changchun Institute of Applied Chemistry, Cas	2,495	7%

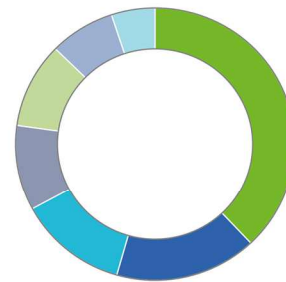
Top technology fields in Changchun

Patents



Transport (16%)	Pharma (6%)
Electrical machinery (12%)	Optics (5%)
Measurement (11%)	Control (4%)
Computer tech. (7%)	

Publications



Chemistry (30%)	Biochem. & biotech. (8%)
Physics & math (13%)	Earth sciences (6%)
Engineering (10%)	Clinical medicine (4%)
Technology (8%)	

19% of Changchun's PCT patent applications are filed in collaboration with other inventors, with **Beijing**, **Shenzhen-Hong Kong-Guangzhou** and **Shanghai-Suzhou** emerging as the top collaborative locations.

51% of Changchun's scientific articles are published in collaboration with other organizations, with the top three collaborating locations being **Beijing**, **Shenzhen-Hong Kong-Guangzhou** and **Shanghai-Suzhou**.