

## Science cities

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**Nature Index 2020 Science cities** a supplement to *Nature*, is produced by Nature Research, the flagship science portfolio of Springer Nature. This publication is based on data from the Nature Index, a Nature Research database, with a website maintained and made freely available at [natureindex.com](http://natureindex.com).

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**W**hat makes a science city, let alone a leading science city? Many factors come to mind, such as a high R&D spend, a concentration of research institutions and specialist science facilities, and an ability to attract global science talent. By our measure, the top science cities are those whose institutions collectively publish the most output in the 82 high-quality journals tracked by the Nature Index. The journals were selected by independent committees of 58 leading natural-sciences researchers, who were asked to nominate the journals in which they would most like to publish their best work. Their deliberations were validated by a survey of more than 6,000 scientists worldwide.

Beijing is the top science city in the Nature Index in 2019 based on Share, our key metric (see note below). The Chinese capital also makes a far greater contribution to the Share of its region (21%) than any of the other top five cities in the index (New York 10.3%, Boston 9.5%, San Francisco-San Jose 8.4%, Shanghai 10.9%).

We recognize, though, that output of articles in selected journals is just one of many potential metrics on which a 'science city' might be assessed. In addition to those listed above, the start-up environment and digital connectivity might be judged relevant, for example. These indicators and others are represented on page S50, where, for a broader perspective, our top five cities are viewed through the lenses of five different publicly available indices.

We are pleased to acknowledge the financial support of the Beijing Municipal Science & Technology Commission in producing this supplement. As always, *Nature* retains sole responsibility for all editorial content.

**Catherine Armitage**  
*Chief editor*

### Note on Share:

Nature Index's signature metric, **Share**, is a fractional count for an article allocated to an institution, city or region, that takes into account the proportion of authors on the article whose institutional affiliation is with that institution, city or region. For the calculation of Share, all authors are considered to have contributed equally to the article, and the maximum combined Share for any article is 1.0.



**On the cover**  
Composite of Beijing, Shanghai, and New York city skylines  
Cover images: Getty Images

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