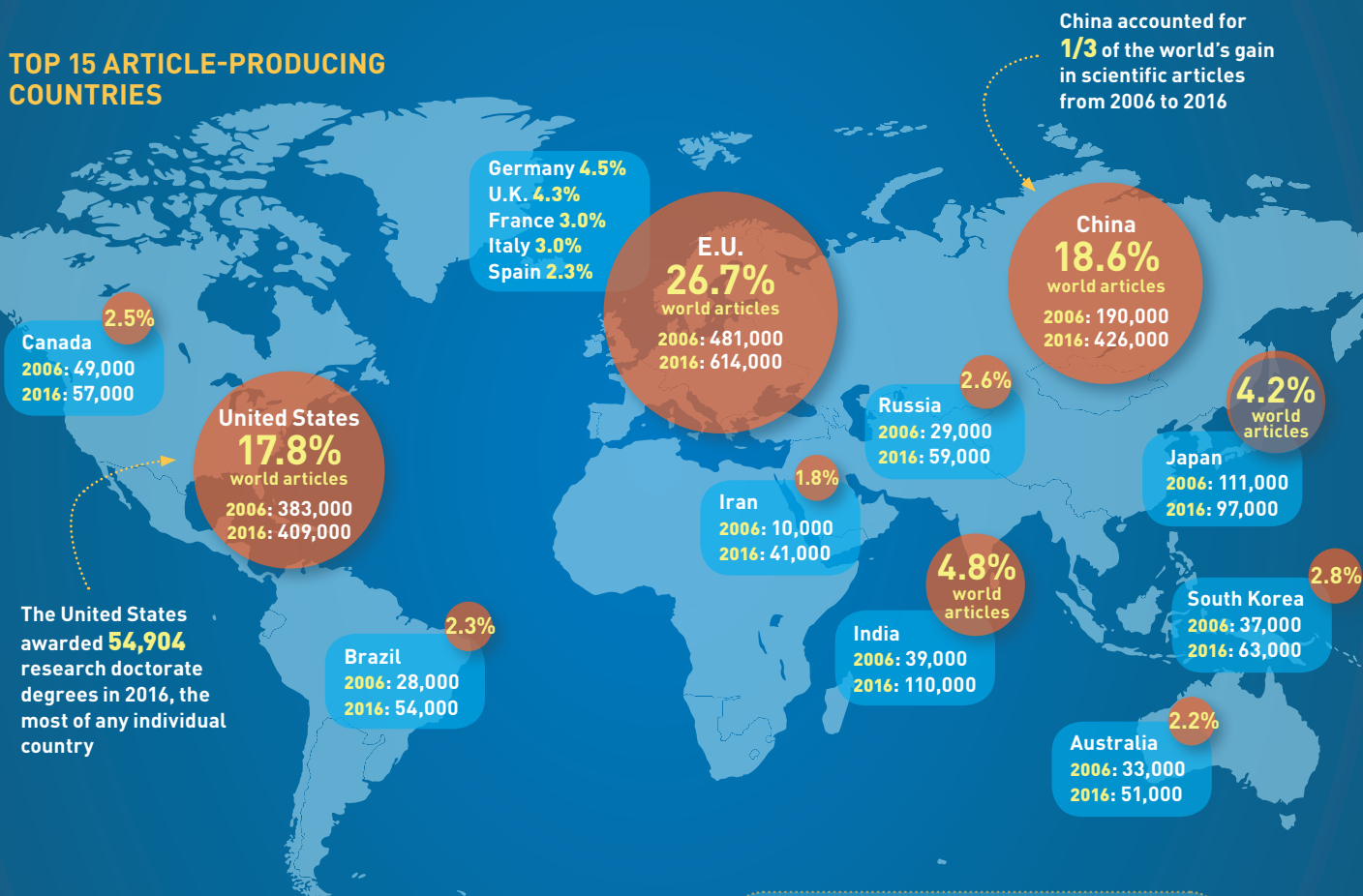


# Scientific Research A Global Production

Over the past decade, production of research-based science and engineering knowledge has grown worldwide. Here we look at the top article-producing countries and international collaborators. For a look at some particularly interesting optical research produced over the past year, see OPN's special feature "Optics in 2018," beginning on p. 30.

## TOP 15 ARTICLE-PRODUCING COUNTRIES



The United States awarded **54,904** research doctorate degrees in 2016, the most of any individual country

## INTERNATIONAL COLLABORATION

From 2006 to 2016, worldwide international coauthorship increased from **16.7%** to **21.7%**

United Kingdom	57.1%
France	54.8%
Germany	51.0%
United States	37.0%
Japan	27.9%
China	20.3%
India	17.4%

Astronomy is the most international field, with **54.0%** of 2016 publications internationally coauthored

## WOMEN IN AUTHORSHIP

From 2006 to 2015, scientific authorship by women increased **>20%**, reaching nearly **34%**

Republic of Korea	43.8%
China	43.0%
Brazil	39.1%
Poland	38.2%
Australia	35.4%
Turkey	35.4%
Italy	34.4%

South Korea and China achieved gender parity in 2015 with **40%** or more of women in authorship