

## Democratizing Renewable energy: The coming electron revolution

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The societal pressure to adopt renewable energy has inspired researchers to develop new ideas for materials that can lead to breakthrough. In the conference of parties (COP21), 195 countries took an oath to cut emission as much as possible to keep global warming < 20 Celsius. This can only be achieved by increasing the share of renewable energy in our percentage mix of electricity generation and be carbon neutral by 2050.

The renewable sources, such as hydroelectric, wind, wave, biomass, geothermal, and photovoltaic are vital for the sustainability of our planet. The rapid fall in the cost of renewable energy generation is driving the shift to low carbon-based technologies. Solar energy can be harvested at a cut-rate price and thin film photovoltaics fabricated from perovskites as a light harvester has made stunning progress in the recent years. The power conversion efficiency in perovskite solar cells is now approaching parity with that of the established technology.

In this talk, strategies to overcome instability in perovskite solar cells and the use of innovative materials will be discussed.

Presenta y modera:

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## Sesión 317 – online Miércoles 3 de febrero de 2021· 18h

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