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THE NEXT GENERATION OF SOLAR ENERGY: THE PEROVSKITE SOLAR CELLS

Nam-Guy Park is distinguished professor at Sungkyunkwan University in South Korea. Considered as one of the precursors of solar cells based on hybrid perovskites, it has especially led to improve the efficiency of the first cells from 3.8% for the first (carried out by T. Miyasaka) to 6.5% in 2011 and 9% in 2012.

In 1995, NG Park obtained his PhD in “Inorganic Solid State Chemistry” at Seoul National University. His adventure in renewable energies really began in 1996 when he decided to pursue his post-doctoral studies in France at ICMCB-CNRS until 1997. He then moved to the USA and began his research on high-efficiency mesoscopic solar cells, including perovskite solar cells and dye-sensitized solar cells, while working at the National Renewable Energy Laboratory as a post-doctoral researcher. After 5 years abroad, NG Park returned to Korea and joined the Electronics and Telecommunications Research Institute as a principal scientist until 2005. He then became Director of Solar Cell Research Center at Korea Institute of Science and Technology before joining Sungkyunkwan University in 2009.

During these years, NG Park received many awards including the Scientific Award of the Month (MEST, Korea), the KyungHyang Electricity and Energy Award (KEPCO, Korea), the KIST Award of the Year (KIST, Korea), the Dupont Science and Technology Award (Dupont, Korea) and the SKKU fellowship. He has written more than 150 scientific papers, filed more than 35 patent applications and written 3 book chapters. In 2011, his paper announcing a 6.5% efficiency for perovskite cells was mentioned 2360 times. But it was in 2012 that NG Park triggered the incredible rise of halogenated hybrid perovskites in the NREL diagram with its article, taken up nearly 5,000 times, announcing a 9% yield, only one year after the 6.5% record.

(Credit: Summary by PhotoVoltaic Institute of Ile de France, IPVF, Palaiseau, FR)

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