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## Education

- Ph.D., Material Science, CNRS, University of Bordeaux 1, France, July 17<sup>th</sup>, 1989.
- Master's Degree, Chemistry, University of Bordeaux 1, France, June 25<sup>th</sup>, 1986.

## Professional Experience

**February 1998-Present.** Argonne distinguished Fellow and team leader of the Advanced Lithium Battery Technology program at Argonne National Laboratory, responsible for directing the research and development of advanced materials and battery systems for HEV, PHEV, EV, satellite, military and medical applications.

<b>June 2015~June 2020</b>	Deputy Director of US/China Clean Energy research center
<b>2016~2022</b>	adjunct professor at Stanford University
<b>2020~ present</b>	Professor at University of Chicago (Joint appointment)

**2012~ 2015** Adjunct distinguished professor at King Abdul-Aziz University, Jeddah, Saudi Arabia

**2011~ 2015** Visiting distinguished professor at Hanyang University, Seoul, south Korea

**2015~ 2018** visiting distinguished professor at Peking University, Shenzhen, China

**2016~ 2020** adjunct professor at Hong Kong University of science & Technology

**April 1994-February 1998.** Manager, Fundamental Technology Laboratories, Corporate R&D Center, Japan Storage Battery Company, Ltd., Kyoto, Japan.

**November 1992-March 1994.** Project Leader, Osaka National Research Institute, Agency of Industrial Science and Technology, Ministry of Trade and Industry, Osaka, Japan.

**November 1990-October 1992.** Research Associate, Department of Industrial Chemistry, Kyoto University, Kyoto, Japan.

**January 1990-October 1990.** Research Associate, Laboratory of Physico-Chemistry and Physics of Materials, Louven Catholic University, Louven, Belgium,

## Honors and Awards

- Fellow of the European National Academy of Sciences (2023)

- Fellow of the National Academy of Inventors (2021)
- Global Energy Prize (2019)
- R&D 100 award (2019)
- Electrochemical Society battery Research award (2019)
- International coalition for energy storage and innovation award, 2019
- Elsevier Energy Storage Material Award, Shenzhen, October 2018
- Argonne Commercialization Excellence, Lifetime achievement award, 2018
- Argonne Commercialization Excellence, Delivering Impact award, 2018
- NAATBatt life achievement award March 2017
- R&D 100 award (2014)
- FMC award for outstanding research in batteries for electric vehicles (2014)
- US Department of Energy outstanding scientist award, 2013
- Dow Chemical outstanding scientist award In the field of green Energy, 2013
- R&D 100 award (2012)
- Electrochemical Society battery Technology award (2010)
- International Battery Association Award (2010)
- Pacesetter Award, Argonne National Laboratory (2009)
- R&D 100 award (2009)
- US Federal Laboratory Award for Excellence in Technology Transfer (2009)
- R&D 100 award (2008)
- University of Chicago Board of Governors Distinguished performance Award (2008)
- R&D 100 Award (2005)
- Illinois Federal Laboratory Award for Excellence in Technology Transfer (2008)
- Scientific American Top Worldwide 50 Research Leader Award (2003)
- Pacesetter Award, Argonne National Laboratory (1999)
- DOE Certificate of Appreciation (1999)
- Japan Storage Battery Association, First Prize Awards (1995, 1996)
- Japanese Science and Technology Agency Award (1992)
- Japan Society for the Promotion of Science Award (1990)
- Louven Catholic University/NATO Award (1990)

## **Career Activities & Highlights**

- Most cited scientist in the world in the field of battery technology to (<http://sciencewatch.com/ana/fea/08novdecFea/>)
- Hold the largest number of papers in the world on battery related topics from 2000 to 2018 (science watch)
- Member of the board of the Committee on Fuel Economy of light duty vehicles of the U.S. National Research Council at the US Academy of Sciences
- Electrochemical society Fellow
- Founder and Chair of the International Conference on Advanced Lithium Batteries for Automotive Applications (ABAA-1), 2008 in Chicago.
- President of the International meeting on lithium battery Association, (IMLB) (2012~)

- Organizer of the IMLB-2016 in June 19<sup>th</sup>, 2016 Chicago (largest battery meeting in the world)
- Chairmen of the International Lithium Battery for Automotive Association (2009~)
- Associate Editor of Nano Energy Journal (IF:15)
- Co-chair of the 2<sup>nd</sup> ABAA (2009, Tokyo), co-chair of the 3<sup>rd</sup> ABAA (2010, Seoul) and co-chair of the 4<sup>th</sup> ABAA (2011 in Beijing).
- Chair of the ABAA-5 in Istanbul, Turkey 2012
- Chair and organizer of the polymer Battery and fuel cell conference, Chicago, 2011
- Founder and chair of the first Fluorinated Materials & Energy Conversion International workshop, Bordeaux, France, March 2010
- Vice President of the executive committee of Beijing Forum on advanced batteries for automotive applications (2009~ 2017)
- Chairmen of the review committee of Japan/European Union research Grant initiative for energy storage
- Organizer and chair of the 5<sup>th</sup> international conference on Polymer battery & Fuel Cell in Chicago PBFC-5
- Have given hundreds of plenary, keynotes and invited talks at many international conferences and industries dealing with battery materials and battery systems for grid, and automotive applications.
- Gave numerous lectures to students at various universities in the US, China, Korea, Japan, Germany, Austria, France, Spain, Morocco, South Africa, Turkey, France, Belgium, Chile, Sweden, Spain, Netherland, Switzerland, Belgium, Australia, England, Scotland, Ireland, Saudi Arabia, Thailand, Indonesia, Taiwan, Qatar, Brazil, Argentina, Hong Kong, Italy and Canada,
- Chair of the US-China annual workshop on energy storage and vehicle technology
- Chair of the Argonne/NEDO-Japan annual workshop on energy storage
- Active member of the Electrochemical Society, the Material Research Society, American Chemical society and the American Ceramic Society.
- Reviewer of national project in Japan, France, Germany, Australia, Poland, New Zealand and USA
- Reviewer of many peer-review journals including Science, and Nature
- Conference international scientific committee member of: International Meeting on Lithium Batteries IMLB, African Materials Research Society, SAE Hybrid Vehicle Technologies Symposium, International conference on polymer and fuel cells, advanced fluorine chemistry conference, Beijing International Forum on lithium battery, Shenzhen forum on lithium battery, International Conference on phosphate materials,

Peer reviewed papers in international Journals: **742 Google H-index: 159; Citations: 87619**

Patent & Patent Applications and invention: **188** (123 granted, 69 Pending)

Invited talks and plenary talks: over **350**

#### **Amine's Technology licensed by Industry**

- High Energy NMC cathode: licensed to TODA, BASF, LG Chemical, General Motors, Envia, Umicore, Samsung, ATL

- Electrolyte interface to stabilize anode: Licensed to LG-Chemical. General Motors, Envia, Samsung
- Gradient Cathode: Licensed to Microvast  
Pre lithiation of silicon Technology: Licensed to Microvast  
Fluorinated NMC cathode: licensed to TODA, BASF, LG Chemical, General Motors, Envia, Umicore and Samsung
- Process for making cathode material: licensed to TODA, BASF, LG Chemical, General Motors, Envia, Umicore and Samsung