

In honor of the scientific legacy of professor Michel Che (1941–2019)



Michel Che (1941–2019)

We are deeply saddened that Professor Michel Che, an outstanding scientist in catalysis at the Sorbonne University (formerly Pierre and Marie Curie University in Paris until 2018) and one of the Advisory Board members for *Advances in Catalysis*, passed away on August 7, 2019. He was diagnosed with pancreatic cancer and passed away at the age of 78 (December 29, 1941 to August 7, 2018) in the Cochin Hospital in Paris. He is survived by his wife Danièle; 2 daughters, Brigitte and Catherine, 2 sons, Patrick and Didier, and 9 grandchildren. The funeral ceremony for Michel Che was held at the

Catholic church of his residence town Bourg-la-Reine in greater Paris area. This is a great loss to his family, friends, and the global catalysis community.

Prof. Che had a distinguished scientific career in chemistry and catalysis research. He has conducted pioneering research in the field of surface reactivity related to catalysis phenomena. From his published studies and from his biography, the main objective of his research was to establish a methodology to unravel the phenomena occurring during the successive steps of catalyst preparation, adsorption, and catalysis, mostly in the case of supported catalysts. Prof. Che had developed a molecular approach based on the use of transition metal complexes, stable isotopes, and suitable spectroscopic methods to systematically study the phenomena developing at the liquid–solid, gas–solid, and solid–solid interfaces. Through this approach, and by carefully designing experiments to identify and isolate the key parameters controlling “metal–support” interactions, he was able to show that catalyst preparation can best be understood in the conceptual framework of several fields of chemistry, and in particular colloid science, electrochemistry, supramolecular chemistry, coordination chemistry, geochemistry, solid-state chemistry, and surface science. Largely demonstrated by his publications, he had been able to clarify the role played by the oxide support in terms of charged/neutral

surface, counter-ion, receptor, ligand, reactant, and solid solvent. This is but one example of his research accomplishments.

A widely respected and prolific scholar in the field of catalysis with 450 publications in leading journals, Prof. Che also made important contributions to *Advances in Catalysis*. He was an author of four widely cited review papers published in *Advances in Catalysis*, and an Advisory Board member who served in that role from 2004 to 2019. He was also a mentor for Chunshan Song, the current Editor for *Advances in Catalysis* since 2016.

Table 1 lists the top 25 most highly cited articles authored or coauthored by Prof. Che with his coworkers and collaborators based on *Web of Science* as of September 2019. His top three most widely cited and influential papers, for which he was the lead author, were all published in *Advances in Catalysis* in 1989, 1983, and 1982, respectively. The first covers the “Influence of particle-size on the catalytic properties of supported metals” and was coauthored with Dr. Carroll O. Bennett, which has received 675 citations. This review article addressed important questions on metal particles supported on carrier materials as to below which particle-size the metallic properties are lost, and how to achieve a high dispersion of the metal and to stabilize it against sintering. The article also discussed that in some reactions, however, the support for the metal is not inert and the overall process is a combination of two functions: that of the metal and that of the catalytically active support. This review was a milestone publication that stimulated numerous studies in the field.

The second and the third of his top cited review articles published in *Advances in Catalysis* focus on “Characterization and reactivity of molecular oxygen species on oxide surfaces” and “Characterization and reactivity of mononuclear oxygen species on oxide surfaces” and were coauthored with A.J. Tench, which have been cited 675 and 515 times, respectively. These two review papers were based in part on his collaboration with Dr. Antony Tench at the Atomic Energy Research Establishment at Harwell, United Kingdom between 1972 and 1982. In general, the surface oxygen species can be divided into two types, i.e., mononuclear and molecular. Molecular oxygen species are also formed on the surface. The use of isotopic labeling with ^{17}O dramatically improved the characterization of the adsorbed oxygen species on solid surface at the molecular level. The forms and reactivities of oxygen species including molecular oxygen species and mononuclear species on surfaces were critically reviewed in these two papers, respectively, focusing on understanding the roles of adsorbed molecular oxygen species and the mononuclear forms of oxygen in oxidation reactions on surfaces.

Table 1 List of top 25 most cited papers published by Michel Che and collaborators

No.	Title of paper, authors, journal and publication details	Times cited
1	The influence of particle-size on the catalytic properties of supported metals Che, M. and Bennett, C.O., <i>Advances in Catalysis</i> , Vol. 36, pp. 55–172, published 1989	675
2	Characterization and reactivity of molecular-oxygen species on oxide surfaces Che, M. and Tench, A.J., <i>Advances in Catalysis</i> , Vol. 32, pp. 1–148, published 1983	675
3	Characterization and reactivity of mononuclear oxygen species on oxide surfaces Che, M. and Tench, A.J., <i>Advances in Catalysis</i> , Vol. 31, pp. 77–133, published 1982	515
4	Photoluminescence and photocatalytic activity of highly dispersed titanium-oxide anchored onto porous VYCOR glass Anpo, M., Aikawa, N., Kubokawa, Y., Che, M., Louis, C., Giamello, E., <i>Journal of Physical Chemistry</i> , Vol. 89, issue 23, pp. 5017–5021, published 1985	286
5	Generation of superoxide ions at oxide surfaces Anpo, M., Che, M., Fubini, B., Garrone, E., Giamello, E. and Paganini, M.C., <i>Topics in Catalysis</i> , Vol. 8, issue 3–4, pp. 189–198, published 1999	247
6	Applications of photoluminescence techniques to the characterization of solid surfaces in relation to adsorption, catalysis, and photocatalysis Anpo, M. and Che, M., <i>Advances in Catalysis</i> , Vol. 44, pp. 119–257, published 1999	228
7	Photocatalytic decomposition of NO at 275 K on titanium oxides included within Y-zeolite cavities: The structure and role of the active sites Yamashita, H., Ichihashi, Y., Anpo, M., Hashimoto, M., Louis, C. and Che, M., <i>Journal of Physical Chemistry</i> , Vol. 100, issue 40, pp. 16041–16044, published Oct 3, 1996	227
8	In-situ XAFS, photoluminescence, and IR investigations of copper ions included within various kinds of zeolites. Structure of Cu(I) ions and their interaction with CO molecules Yamashita, H., Matsuoka, M., Tsuji, K., Shioya, Y., Anpo, M. and Che, M., <i>Journal of Physical Chemistry</i> , Vol. 100, issue 1, pp. 397–402, published Jan 4, 1996	226

Continued

Table 1 List of top 25 most cited papers published by Michel Che and collaborators—cont'd

No.	Title of paper, authors, journal and publication details	Times cited
9	Polyoxometallates as models for oxide catalysts .1. An UV visible reflectance study of polyoxomolybdates—Influence of polyhedra arrangement on the electronic-transitions and comparison with supported molybdenum catalysts Fournier, M., Louis, C., Che, M., Chaquin, P. and Masure, D., <i>Journal of Catalysis</i> , Vol. 119, issue 2, pp. 400–414, published Oct 1989	203
10	Analog of surface molybdenyl ion in Mo-SiO ₂ supported catalysts—Isopolyanion MO ₆ O-19(3)-studied by EPR and UV-visible spectroscopy—Comparison with other molybdenyl compounds Che, M., Fournier, M. and Launay, J.P., <i>Journal of Chemical Physics</i> , Vol. 71, issue 4, pp. 1954–1960, published 1979	196
11	Identification of oxygen species adsorbed on reduced titanium dioxide Naccache, C., Meriaudeau, P., Che, M. and Tench, A.J., <i>Transactions of the Faraday Society</i> , Vol. 67, issue 578, pp. 506–506, published 1971	188
12	Preparation and characterization of the Cu ⁺ /ZSM-5 catalyst and its reaction with no under UV irradiation at 275 K. In-situ photoluminescence, EPR, and FT-IR investigations Anpo, M., Matsuoka, M., Shioya, Y., Yamashita, H., Giamello, E., Morterra, C., Che, M., Paterson, H.H., Webber, S., Ouellette, S. and Fox, M.A., <i>Journal of Physical Chemistry</i> , Vol. 98, issue 22, pp. 5744–5750, published Jun 2, 1994	178
13	Characterization of titanium-silicon binary oxide catalysts prepared by the sol-gel method and their photocatalytic reactivity for the liquid-phase oxidation of 1-octanol Yamashita, H., Kawasaki, S., Ichihashi, Y., Harada, M., Takeuchi, M., Anpo, M., Stewart, G., Fox, M.A., Louis, C. and Che, M., <i>Journal of Physical Chemistry B</i> , Vol. 102, issue 30, pp. 5870–5875, published Jul 23, 1998	171
14	Dimerization of olefins with nickel surface complexes in X-type zeolite or on silica Bonnevot, L., Olivier, D. and Che, M., <i>Journal of Molecular Catalysis</i> , Vol. 21, issue Oct, pp. 415–430, published 1983	169
15	Characterization of the Ni(II) phase formed on silica upon deposition-precipitation Burattin, P., Che, M. and Louis, C., <i>Journal of Physical Chemistry B</i> , Vol. 101, issue 36, pp. 7060–7074, published Sep 4, 1997	165

Table 1 List of top 25 most cited papers published by Michel Che and collaborators—cont'd

No.	Title of paper, authors, journal and publication details	Times cited
16	Photocatalysis on native and platinum-loaded TiO ₂ and ZnO catalysts—origin of different reactivities on wet and dry metal-oxides Anpo, M., Chiba, K., Tomonari, M., Coluccia, S., Che, M. and Fox, M.A., <i>Bulletin of the Chemical Society of Japan</i> , Vol. 64, issue 2, pp. 543–551, published Feb 1991	149
17	Ligand-promoted alumina dissolution in the preparation of MoO _x /gamma-Al ₂ O ₃ catalysts: Evidence for the formation and deposition of an Anderson-type alumino heteropolymolybdate Carrie, X., Lambert, J.F. and Che, M., <i>Journal of the American Chemical Society</i> , Vol. 119, issue 42, pp. 10137–10146, published Oct 22, 1997	147
18	Molecular approach to the mechanism of deposition—Precipitation of the Ni(II) phase on silica Burattin, P., Che, M., and Louis, C., <i>Journal of Physical Chemistry B</i> , Vol. 102, issue 15, pp. 2722–2732, published Apr 9, 1998	132
19	EPR as a tool to investigate the transition metal chemistry on oxide surfaces Dyrek, K. and Che, M., <i>Chemical Reviews</i> , Vol. 97, issue 1, pp. 305–331, published Jan–Feb 1997	132
20	Catalytic properties of silica-supported molybdenum catalysts in methanol oxidation—The influence of molybdenum dispersion Louis, C., Tatibouet, J.M., and Che, M., <i>Journal of Catalysis</i> , Vol. 109, issue 2, pp. 354–366, published Feb 1988	131
21	Nickel(II) ion support interactions as a function of preparation method of silica-supported nickel materials Clause, O., Kermarec, M., Bonneviot, L., Villain, F. and Che, M., <i>Journal of the American Chemical Society</i> , Vol. 114, issue 12, pp. 4709–4717, published Jun 3, 1992	130
22	Photocatalytic reactions on chromium containing mesoporous silica molecular sieves (Cr-HMS) under visible light irradiation: decomposition of NO and partial oxidation of propane Yamashita, H., Yoshizawa, K., Ariyuki, M., Highashimoto, S., Che, M. and Anpo, M., <i>Chemical Communications</i> , issue 5, pp. 435–436, published 2001	123
23	Electron-spin resonance studies on titanium-dioxide and magnesium-oxide—Electron donor properties Che, M., Imelik, B. and Naccache, C., <i>Journal of Catalysis</i> , Vol. 24, issue 2, pp. 328–, published 1972	117

Continued

Table 1 List of top 25 most cited papers published by Michel Che and collaborators—cont'd

No.	Title of paper, authors, journal and publication details	Times cited
24	FTIR study of CO interaction with Ru/TiO ₂ catalysts Hadjiivanov, K., Lavalley, J.C., Lamotte, J., Mauge, F., Saint-Just, J. and Che, M., <i>Journal of Catalysis</i> , Vol. 176, issue 2, pp. 415–425, published Jun 10, 1998	116
25	Role of silanol groups in the incorporation of V in Beta zeolite Dzwigaj, S., Massiani, P., Davidson, A. and Che, M., <i>Journal of Molecular Catalysis A-Chemical</i> , Vol. 155, issues 1–2, pp. 169–182, published Apr 20, 2000	114

Note: Citation record based on a search on *Web of Science* in the library of the Pennsylvania State University on September 21, 2019.

The research contributions through his top cited papers in [Table 1](#) cover a broad range of chemistry of catalyst preparation, characterization with in situ and ex situ spectroscopic techniques and physicochemical methods, and catalyst application in various chemical reaction processes. The papers in [Table 1](#) reflect the characteristics of the over 450 papers and a two-volume book published by Prof. Che and his coworkers and collaborators.

[Table 2](#) highlights the successful career profile of Prof. Che. born in Lyon on December 29, 1941, he received a degree in Chemical Engineering from Ecole Supérieure de Chimie Industrielle de Lyon in 1964, and then joined the National Center for Scientific Research (CNRS), Institute of Research on Catalysis in Lyon. He was awarded a Ph.D. degree by the University of Lyon in 1968. He conducted experimental research on titanium dioxide using electron paramagnetic resonance (also called electron spin resonance) spectroscopy under the supervision of Dr. Claude Naccache. Judging from his CV, the characterization of oxides and catalysts using electron spin resonance spectroscopy was a central topic of his early research publications starting 1967. Following postdoctoral research at Princeton University with Prof. John Turkevich from 1969 to 1971, he returned to France and continued to work at the Institute of Research on Catalysis in Lyon until 1974. He became a professor at Pierre and Marie Curie University (also known as University of Paris VI) in Paris in 1975 and worked there for the rest of his research career involving many coworkers and collaborators worldwide.

For the details of career development of Prof. Che, we refer to the more eloquent description recently published by Sir John M. Thomas

Table 2 Career profile of Professor Michel Che**Life span** **Born December 29, 1941 in Lyon, died August 7, 2019 in Paris, France***Education*

1964	Chemical Engineering degree from Ecole Supérieure de Chimie Industrielle de Lyon
1968	Docteur ès Sciences degree from Université de Lyon
1969–1970	NATO Postdoctoral Fellow, Princeton University
1970–1971	AEC Research Associate, Princeton University

Employment

1964–1968	Attaché de Recherche, National Center for Scientific Research (CNRS), Institute of Research on Catalysis, Villeurbanne, France
1968–1974	Chargé de Recherche, National Center for Scientific Research (CNRS), Institute of Research on Catalysis, Villeurbanne, France
1972–1983	During this period, regular Visiting Senior Scientist during the summer, Atomic Energy Research Establishment, Harwell, United Kingdom
1974–1975	Maître de Recherche, National Center for Scientific Research (CNRS), Institute of Research on Catalysis, Villeurbanne, France
1975–1976	Associate Professor, Université Pierre et Marie Curie, Paris, France
1976–1992	Professor, Université Pierre et Marie Curie, Paris, France
1992–2019	Distinguished Professor, Université Pierre et Marie Curie, Paris, France
1995–2019	Professor, Boris Imelik Chair of Surface Reactivity and Catalysis, Institut Universitaire de France, Paris, France

Distinguished services

1989–1994	Elected President of the Catalysis Division, French Chemical Society
1990–1995	Elected President–Founder of the European Federation of Catalysis Societies, EFCATS
1992–1995	Elected Vice–President of the Council of the International Congress on Catalysis
1996–2000	President–Elect of the International Association of Catalysis Societies (formerly the Council of the International Congress on Catalysis)
1999–2019	Member of the International Review Committee, and the Chairman of the Academic Committee (2006–2014) of the State Key Laboratory of Catalysis, Dalian Institute of Chemical Physics, Dalian, China
2000–2004	President of the International Association of Catalysis Societies (formerly the Council of the International Congress on Catalysis)

Continued

Table 2 Career profile of Professor Michel Che—cont'd**Life span** **Born December 29, 1941 in Lyon, died August 7, 2019 in Paris, France**

2002–2005	Chairman of the Department of Inorganic Chemistry, Université Pierre et Marie Curie, Paris (France)
2006–2014	President of Academic Review Committee of the State Key Laboratory of Catalysis (SKLC), Chinese Academy of Sciences, Dalian, China
2007–2011	Elected Chairman of Chemistry Section Committee, Academia Europaea
2007–2009	Elected Vice-President of the French Chemical Society
2012–2019	Vice Chair of International Advisory Board, Collaborative Innovation Center of Chemistry for Energy Materials (iChEM), consisting of Xiamen University, Fudan University, University of Science and Technology of China, and Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China
Up to ~2019	Editorial advisory boards for the following journals: <i>Advances in Catalysis</i> (2004–2019); <i>Journal of Catalysis</i> ; <i>Journal of the Chemical Society</i> , <i>Faraday Transactions</i> (up to 1994); <i>Critical Reviews in Surface Chemistry</i> ; <i>Catalysis Reviews</i> ; <i>European Journal of Solid State and Inorganic Chemistry</i> (up to 1991); <i>Catalysis Letters</i> ; <i>Research on Chemical Intermediates</i> ; <i>Bulletin de la Société Chimique de France</i> (Associate Editor, up to 1997); <i>Topics in Catalysis</i> ; Catalysis Surveys from Japan (1997–2002); Catalysis Surveys from Asia (from 2003); <i>Accounts of Chemical Research</i> (2001–2003); <i>Applied Magnetic Resonance</i> (2001–2011); <i>Chinese Journal of Catalysis</i> (2007–2019); <i>Catalysis Science & Technology</i> , <i>Royal Society of Chemistry</i> (2010–2019)
<i>Invited professorship</i>	
1978–1989	1978—Invited Professor, Institute of Chemistry, Beijing, Chinese Academy of Sciences, China; 1980—Invited Professor, University of Peking, Beijing, China; 1983—Invited Professor, University of Szeged, and Institute of Isotopes, Budapest, Hungarian Academy of Sciences, Hungary; 1986—Invited Professor, Tokyo Institute of Technology, Tokyo, Japan; 1987—Honorary Professor, Shanxi University, Taiyuan, China
1990–1999	1995—Invited Professor, Chemistry Research Promotion Centre, National Science Council, Taipei, Taiwan; 1995—Honorary Professor, Tianjin University, Tianjin, China; 1996—Invited Professor, University of Turin, Italy; 1996—Guest Professor, Peking University, Beijing, China; 1996—Guest Professor, Taiyuan University of Technology, China; 1998—Invited Professor, Osaka Prefecture University, Osaka, Japan; 1998–1999—Visiting Professor, Ludwig-Maximilians University, Munich, Germany

Table 2 Career profile of Professor Michel Che—cont'd**Life span** **Born December 29, 1941 in Lyon, died August 7, 2019 in Paris, France**

2000–2019 2001–2002—Invited Professor, University of Bucharest, Romania; 2005—Honorary Professor, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, China; 2008—Invited Professor, Osaka Prefecture University, Sakai, Japan; 2010—Honorary Professor, Osaka Prefecture University, Sakai, Japan

Honors and awards

1972	Van't Hoff Award Royal Netherlands Academy of Sciences (The Netherlands)
1975	Scientific Foundation L. Chatin Award (France)
1986	Japanese Society for the Promotion of Science Lectureship (Japan)
1992	Member of the Academia Europaea
1993	Foreign Member of the Hungarian Academy of Sciences (Hungary)
1993	Medal of the City of Montpellier (France) at the occasion of the first European Congress on Catalysis (EuropaCat I) organized in this city
1995	Distinguished Lecturer "Frontiers in Chemical Research," Texas A & M University (United States)
1995	Professor at the Institut Universitaire de France, Boris Imelik Chair of Surface Reactivity and Catalysis (France)
1995	Pierre Sue Award, French Chemical Society (France)
1995	Honorary Member of Romanian Catalysis Society (Romania)
1997	Maria Sklodowska-Curie and Pierre Curie Award, French and Polish Chemical Societies (France and Poland)
1997	Von Humboldt—Gay-Lussac Award, Alexander von Humboldt Foundation (Germany)
1998	Japanese Society for the Promotion of Science Lectureship (Japan)
1999	Alexander Joannides Grand Prize of Chemistry, French Academy of Sciences (France)
2000	Doctor Honoris Causa, at the occasion of the 600th anniversary of the Jagellonian University, Cracow (Poland)
2000	Contemporary Inorganic Chemistry—II Lecturer, Texas A&M University, College Station, Texas, (United States)
2001	Doctor Honoris Causa, at the occasion of the 70th anniversary of the Technical University of Lisbon, Lisbon (Portugal)
2002	Professor Honoris Causa, University of Bucharest, Bucharest (Romania)

Continued

Table 2 Career profile of Professor Michel Che—cont'd**Life span** **Born December 29, 1941 in Lyon, died August 7, 2019 in Paris, France**

2002	Member of the German Academy of Sciences Leopoldina, at the occasion of its 350th anniversary (Germany)
2003	Elected Member of Chemistry Section Committee, Academia Europaea
2003	Antonio Giuseppe Nasini Lecture, University of Turin, Turin (Italy)
2003	Elected Honorary Member of the Italian Chemical Society at the occasion of its XXI Congress honoring the 100th Birthday of G. Natta and the 40th Anniversary of its Nobel Prize (Italy)
2003	Guest Editor (with W.N. Delgass and A.T. Bell) of the 40th Anniversary Commemorative Issue (the only one thus far) of the <i>Journal of Catalysis</i>
2004	François Gault Lectureship at the occasion of EuropaCat VI and of the 10th Anniversary of the foundation of the European Federation of Catalysis Societies, EFCATS, Innsbrück (Austria)
2004	Sabatier Medal at the occasion of the 150th Anniversary of Sabatier's Birthday, University of Toulouse (France)
2005	Marcel Prettre Lecture, CPE and University of Lyon (France)
2008	Award and Gold Medal for International Scientific Cooperation of the Chinese Academy of Sciences, Beijing (China)
2009	Friendship Award and Medal, State Administration of Foreign Experts Affairs, at the occasion of 60th anniversary of the People's Republic of China, Beijing (China)
2009	International Science and Technology Cooperation Award and Medal of the People's Republic of China, Beijing (China)
2009/2010	Centenary Lectureship of the Royal Society of Chemistry (United Kingdom)
2010	Honorary Professorship, Osaka Prefecture University (Japan)
2010	Foreign Member, Polish Academy of Arts and Sciences (Poland)
2011	Grignard-Wittig Lectureship from the German Chemical Society in association with the French Chemical Society (Germany)
2014	The Faraday Medal and Lectureship, Royal Society of Chemistry (United Kingdom)
2018	China-France Chemistry Lectureship Award, Chinese Chemical Society (China)

(In Memoriam: Michel Che (1941–2019), at <http://nacatsoc.org/news/in-memoriam-michel-che-1941-2019/>) and that by Prof. Jacques Védérine (Michel Che 1941–2019, at <http://www.iacs-catalysis.org/obituaries.html>).

Apart from his scientific accomplishments and numerous honors and awards listed in Table 2, Prof. Che has made outstanding contributions in professional services to advancing the field of catalysis worldwide. He worked tirelessly for decades to serve and advance the French, European, and international catalysis communities. He is an internationally well-known leader as the Director of the Laboratoire de Réactivité de Surface at the Université Pierre and Marie Curie (also known as University of Paris VI), as the President of the Catalysis Division of French Chemical Society, as the President-Founder of the European Federation of Catalysis Societies, and as the President of the International Association of Catalysis Societies.

Prof. Che is among the first French scientists and among the first catalysis scientists worldwide to visit and lecture in China from 1977 to 1978 when China had just begun to open up to the world. His father immigrated from China to France as a young engineer and he was proud of his Chinese origin as a French chemist. He visited and lectured at numerous universities and research organizations in China and later served on advisory boards for many of the laboratories and research centers related to catalysis and catalytic materials in China in the past 42 years. Through his efforts, Prof. Che had a great impact on the Chinese catalysis community, especially in facilitating the development of international cooperation in the area of catalysis). Prof. Che is widely known and highly respected in the Chinese catalysis community, also in his Chinese name (石·米歇尔, <http://www.dicp.cn/chinesevers/showbody.php?ID=7446>). Table 2 also lists his many invited professorships and appointments on advisory boards in China since 1978 along with his services to the global catalysis community. For these important contributions to the Chinese catalysis and chemistry community, he was honored with the Gold Medal for International Scientific Cooperation from the Chinese Academy of Sciences in 2008, the Friendship Award and Medal from the State Administration of Foreign Experts Affairs in China on the occasion of the 60th Anniversary of the People's Republic of China in 2009. Most recently, he received the China–France Chemistry Lectureship Award from the Chinese Chemical Society in 2018.

Prof. Che was a very kind, generous, and knowledgeable gentleman who had a great sense of *humor*, as he is known by hundreds of his friends worldwide. For example, I first met him at the 11th International Congress on Catalysis in Baltimore in 1996 where he first spoke kindly to me as we stood

in an elevator in the convention center, and that started our professional interactions for the last 24 years. Ten years later, when I (Chunshan Song of Pennsylvania State University at University Park) spent a part of my sabbatical leave as an invited professor at Laboratory of Surface Reactivity in Pierre and Marie Curie University during January–February 2005, Prof. Che gave me a detailed introduction to his research topics along with his philosophy in catalysis research, and shared his extensive knowledge on the historical development of chemistry (from Antoine Lavoisier) and catalysis (from Paul Sabatier) as well as the origin of the universities from medieval times (from the Bologna Studiorum, the Collège de Sorbon). In addition to showing me his collection of rare books, Prof. Che also gave me a personal tour in and around the university campus including the lecture halls where Professor Marie Curie and Professor Pierre Curie taught chemistry and physics, respectively. In February 2005, Prof. Che invited Prof. Sir John M. Thomas of Cambridge University, Prof. Jerzy Pielaszek of Polish Academy of Sciences, and me for a dinner with him and his wife Danièle at their home in Paris. These amazingly interesting meetings and stimulating discussions with Prof. Che greatly inspired me and had a long-lasting influence on me. He was a mentor and provided helpful advice to me when I began to serve as Editor-in-Chief for *Advances in Catalysis* in 2016. Over the last 5 years, I continued to benefit from his advice and greatly enjoyed our annual meetings when we both served on the International Advisory Board–Academic Committee (IAB/AC) for the Collaborative Innovation Center of Chemistry for Energy Materials (*iChEM*) consisting of Xiamen University, Fudan University, the University of Science and Technology of China and the Dalian Institute of Chemical Physics in China from 2015 to 2019, where Prof. Che was Vice Chair of the IAB for *iChEM*, as listed in [Table 2](#).

I deeply cherish the memory of Prof. Michel Che as a mentor, friend, and outstanding scholar, and am grateful he touched my scientific career in a beautiful way. *Professor Michel Che will be greatly missed and remembered by all his friends, colleagues, and his advisees in the broad field of catalysis and catalytic materials worldwide.*

CHUNSHAN SONG
Editor-in-Chief, *Advances in Catalysis*
Distinguished Professor of Fuel Science and Professor
of Chemical Engineering
Director of EMS Energy Institute
The Pennsylvania State University at University Park
State College, Pennsylvania, United States
September 26, 2019