

# Curriculum Vitae of Jun Ma, Ph.D.

*Deputy Director, National Engineering Research Center of Urban Water Resources, Harbin ,China*

*Vice Dean, School of Environmental Science and Engineering*

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## SHORT DESCRIPTION:

Graduated from Harbin Institute of Technology (BS, MS and PhD), Postdoctoral Fellow at Imperial College of UK (recipient of first class Marie Curie Postdoctoral Fellowship). Senior Visiting Scholar at the University of Massachusetts at Amherst and the Swiss Federal Institute of Aquatic Science and Technology (EAWAG) at Switzerland. He is the Changjiang Scholar Professor at Harbin Institute of Technology and the Deputy Director of the National Engineering Research Center of Urban Water Resources, China. His research interest has been in the area of Water and Wastewater Treatment. He has been working in the processes of oxidation, nanoparticles and membranes. He is the recipient of "Sustainable Water Award" of the Royal Society of Chemistry(2016), he is also the recipient of two National Inventory Awards from the Chinese Government. He is the recipient of China Young Scientist Award (one of the ten recipients in 2006), and the Achievement Award of Chiangjiang Scholars (Engineering Science Award, the single recipient in 2007 in China). He holds 4 US patents and 115 Chinese Invention patents and over 300 peer reviewed international journal papers. He is the recipient of Excellence in Review Award of the journal of Environmental Science and Technology. He is the Advisory Board Editorial Member of "Environmental Science and Technology Letter" and RSC Journal of "Environmental Science: Water Research and Technology". He is the Associate Editor of the journal of Advanced Oxidation Technology and Associate Editor of Applied Water Science.

## EDUCATION:

B.E.	Harbin Institute of Technology	(HIT) 1978-1982
M.S.	Harbin Institute of Technology	(HIT) 1982-1985
Ph.D.	Harbin Institute of Technology	(HIT) 1987-1990
Post-doctoral Fellow	Tongji University	1990-1992
Post-doctoral Fellow	Imperial College, London, UK	1993-1995 (Marie Curie Fellow)

## PROFESSIONAL EXPERIENCE:

Assistant Lecturer, Department of Environmental and Municipal Eng., Harbin Institute of Technology, 1985-1987

Lecturer, Department of Environmental and Municipal Eng., Harbin Institute of Technology, 1987-1991

Associate Professor, Department of Environmental and Municipal Eng., Harbin Institute of Technology, 1992-1995

"Marie Curie" Fellow, Civil Engineering Dept, Imperial College, UK, 1993-1995

Full Professor, Department of Environmental and Municipal Eng., Harbin Institute of Technology, 1996-present

Cheung Kong Professorship (Changjiang Scholar), School of Water and Environmental Eng., Harbin Institute of Technology, From 1999

Deputy Director of National Engineering Research Center of Urban Water Resources, From 2005

Visiting Scholar, Massachusetts University, 2003 (for three months).

Visiting Professor, Swiss Federal Institute of Aquatic Science and Technology (EAWAG) at Switzerland

, 2006-2007 (under the scheme of Swiss National Science Foundation, for three months).

Visiting Scholar, Yale University, United States of America, 2014 for one month.

Visiting Scholar, Duke University, United States of America, 2017 for one month.

#### **HONORS AND AWARDS:**

Oxidation Processes, Nanoparticles and Membrane in Water and Wastewater Treatment.

A Symposium in Honor of Professor Jun Ma, held in San Francisco, USA, in April 2017.

Sustainable Water Award (Ma J), by the Royal Society of Chemistry, 2016.

Cheung Kong Scholar Achievement Award 2007 (Engineering Science Award) (Ma J) by Education Ministry of China (single recipient in China in 2007).

China Young Scientist Award 2006 (Ma J) (one of the ten recipients in China in 2006).

National Inventory Award for Science and Technology of China (Second Class), *State Council of China*, 2005( Ma J. and Chen Z.).

National Inventory Award for Science and Technology of China (Second Class), *State Council of China*, 2002 ( Ma J. and Li G. ) .

Provincial Award of Science and Technology (First Class), *Heilongjiang Government*, 2002, 2008 and 2015(Ma J.).

China National Science and Technology Youth Prize, *China Science and Technology Association* and *China Ministry of Personnel*, 1996(Ma J.).

#### **PROFESSIONAL MEMBERSHIP:**

Fellow, the Royal Society of Chemistry, 2015.

Member of Management Committee of the Nano and Water group of International Water Association, since 2012.

Member of Management Committee of the of Metal and Related Substances group of Water of International Water Association, since 2014.

Member of Management Committee of the Particle Separation Group of International Water Association, since 2012.

Board Member of International Ozone Association, IOA-EA3G Group., 2001

Board Member of China University Degree Committee of Civil Engineering, State Council of China , 2002

Board Member of China Water Industry Association, 2001.

Board Member of China Water Supply Association, 1999

Board Member of Polluted Water Purification Group, Water and Wastewater Committee, China Civil Engineering Society, 1999

Member of International Water Association (Former IWSA and IAWQ), 1992-present.

Board Member of Science and Technology Advisor Committee, Heilongjiang Province, 1998-present.

#### RESEARCH INTERESTS:

- (1) Oxidation processes such as permanganate, ferrate, ozone, persulphate, UV, Fenton and Fenton-Like oxidation, and other advanced oxidation processes etc.
- (2) Interface against pollution such as nanoparticles, adsorption, coagulation, dissolved air flotation etc.
- (3) Membrane processes such as ultrafiltration, forward osmosis, nanofiltration, reverse osmosis, catalytic membrane etc.
- (4) Micropollutants removal such as EDCs, POPs, heavy metals and control of DBPs formation.
- (5) Water and Wastewater Treatment Processes and Engineering applications.

#### SELECTED PUBLICATIONS:

- (1) Zhao, X.; Salhi, E.; Liu, H.; **Ma, J.\***; von Gunten\*, U., Kinetic and mechanistic aspects of the reactions of iodide and hypiodous acid with permanganate: oxidation and disproportionation. **Environmental Science & Technology**, 2016.
- (2) Zhang, W.; **Ma, J.\***; Wang, P.; Wang, Z.; Shi, F.; Liu, H., Investigations on the interfacial capacitance and the diffusion boundary layer thickness of ion exchange membrane using electrochemical impedance spectroscopy. **Journal of Membrane Science**, 2016, 502, 37-47.
- (3) Yang, Y.; Pignatello, J. J.; **Ma, J.\***; Mitch, W. A.\*, Effect of matrix components on UV/H<sub>2</sub>O<sub>2</sub> and UV/S<sub>2</sub>O<sub>8</sub><sup>2-</sup> advanced oxidation processes for trace organic degradation in reverse osmosis brines from municipal wastewater reuse facilities. **Water Research**, 2016, 89, 192-200.
- (4) Wang, L.; Liu, Y.; **Ma, J.\***; Zhao, F., Rapid degradation of sulphamethoxazole and the further transformation of 3-amino-5-methylisoxazole in a microbial fuel cell. **Water Research**, 2016, 88, 322-328.
- (5) Luo, C.; Jiang, J.; **Ma, J.\***; Pang, S.; Liu, Y.; Song, Y.; Guan, C.; Li, J.; Jin, Y.; Wu, D., Oxidation of the odorous compound 2, 4, 6-trichloroanisole by UV activated persulfate: Kinetics, products, and pathways. **Water Research**, 2016, 96, 12-21.
- (6) Lu, D.; Zhang, T.; Gutierrez, L.; **Ma, J.\***; Croue, J.-P., Influence of surface properties of filtration-layer metal oxide on ceramic membrane fouling during ultrafiltration of oil/water emulsion. **Environmental Science & Technology**, 2016.
- (7) Kong, X.; Jiang, J.; **Ma, J.\***; Yang, Y.; Liu, W.; Liu, Y., Degradation of atrazine by UV/chlorine: Efficiency, influencing factors, and products. **Water Research**, 2016, 90, 15-23.
- (8) Zhou, Y.; Jiang, J.; Gao, Y.; **Ma, J.\***; Pang, S.-Y.; Li, J.; Lu, X.-T.; Yuan, L.-P., Activation of Peroxymonosulfate by Benzoquinone: A Novel Nonradical Oxidation Process. **Environmental Science & Technology**, 2015, 49, (21), 12941-12950.
- (9) Yang, Y.; Jiang, J.; Lu, X.; **Ma, J.\***; Liu, Y., Production of sulfate radical and hydroxyl radical by reaction of ozone with peroxymonosulfate: A novel advanced oxidation process. **Environmental Science & Technology**, 2015, 49, (12), 7330-7339.
- (10) Wen, G.; Kötzsch, S.; Vital, M.; Egli, T.\*; **Ma, J.\***, BioMig, A Method to Evaluate the Potential Release of Compounds from and the Formation of Biofilms on Polymeric Materials in Contact

- with Drinking Water. **Environmental Science & Technology**, 2015, 49, (19), 11659-11669.
- (11) Song, Y.; Jiang, J.; **Ma, J.\***; Pang, S.-Y.; Liu, Y.-z.; Yang, Y.; Luo, C.-w.; Zhang, J.-q.; Gu, J.; Qin, W., ABTS as an Electron Shuttle to Enhance the Oxidation Kinetics of Substituted Phenols by Aqueous Permanganate. **Environmental science & technology**, 2015, 49, (19), 11764-11771.
- (12) Ren, Y.; Lin, L.; **Ma, J.**; Yang, J.; Feng, J.; Fan, Z., Sulfate radicals induced from peroxymonosulfate by magnetic ferrosphenel  $MFe_2O_4$  (M= Co, Cu, Mn, and Zn) as heterogeneous catalysts in the water. **Applied Catalysis B: Environmental**, 2015, 165, 572-578.
- (13) Luo, C.; **Ma, J.\***; Jiang, J.; Liu, Y.; Song, Y.; Yang, Y.; Guan, Y.; Wu, D., Simulation and comparative study on the oxidation kinetics of atrazine by UV/H<sub>2</sub>O<sub>2</sub>, and. **Water Research**, 2015, 80, 99-108.
- (14) Ding, A.; Pronk, W.; Qu, F.; **Ma, J.**; Li, G.; Li, K.; Liang, H., Effect of calcium addition on sludge properties and membrane fouling potential of the membrane-coupled expanded granular sludge bed process. **Journal of Membrane Science**, 2015, 489, 55-63.
- (15) Chen, L.; Li, X.; Zhang, J.; Fang, J.; Huang, Y.; Wang, P.; **Ma, J.\***, Production of Hydroxyl Radical via the Activation of Hydrogen Peroxide by Hydroxylamine. **Environmental Science & Technology**, 2015, 49, (17), 10373-10379.
- (16) Bai, L.; Liang, H.; Crittenden, J.; Qu, F.; Ding, A.; **Ma, J.**; Du, X.; Guo, S.; Li, G., Surface modification of UF membranes with functionalized MWCNTs to control membrane fouling by NOM fractions. **Journal of Membrane Science**, 2015, 492, 400-411.
- (17) Xinglin Lu, Siamak Nejati, Youngwoo Choo, Chinedum O. Osuji, **Jun Ma\***, and Menachem Elimelech\*. Elements Provide a Clue: Nanoscale Characterization of Thin-Film Composite Polyamide Membranes. **Applied Materials & Interfaces**, 2015, 7(31), 16917-16922.
- (18) Pengchao Xie, Charles-François de Lannoy, **Jun Ma\***, Mark R. Wiesner\*. Chlorination of polyvinyl pyrrolidone-polysulfone membranes: Organic compound release, byproduct formation, and changes in membrane properties. **Journal of Membrane Science**, 2015, 489(1), 28-35.
- (19) Zhenghui Wang, Wei Cheng, **Jun Ma\***. Seeding nuclei for the phase-separation of cellulose acetate solution. **Journal of Membrane Science**, 2015, 489(1), 129-134.
- (20) Dongwei Lu, Tao Zhang, and **Jun Ma\***. Ceramic Membrane Fouling during Ultrafiltration of Oil/Water Emulsions: Roles Played by Stabilization Surfactants of Oil Droplets. **Environmental Science and Technology**, 2015, 49(7), 4235-4244.
- (21) Xinglin Lu, Laura H. Arias Chavez, Santiago Romero-Vargas Castrillón, **Jun Ma\***, and Menachem Elimelech\*. Influence of Active Layer and Support Layer Surface Structures on Organic Fouling Propensity of Thin-Film Composite Forward Osmosis Membranes. **Environmental Science and Technology**, 2015, 49 (3), 1436-1444.
- (22) Xinglin Lu, Chanhee Boo, **Jun Ma\***, and Menachem Elimelech\*. Bidirectional Diffusion of Ammonium and Sodium Cations in Forward Osmosis: Role of Membrane Active Layer Surface Chemistry and Charge. **Environmental Science and Technology**, 2015, 49 (24), 14369-14376.
- (23) Xinglin Lu, Santiago Romero-Vargas Castrillón, Devin L. Shaffer, **Jun Ma\***, and Menachem Elimelech\*. In Situ Surface Chemical Modification of Thin-Film Composite Forward Osmosis Membranes for Enhanced Organic Fouling Resistance. **Environmental Science and Technology**, 2013, 47 (21), 12219-12228.
- (24) Fengmei Shi, Yuxin Ma, **Jun Ma\***, Wang Panpan, Sun Weixiao. Preparation and

characterization of PVDF/TiO<sub>2</sub> hybrid membranes with ionic liquid modified nano-TiO<sub>2</sub> particles. *Journal of Membrane Science*, 2013(427), 259-269.

- (25) Panpan Wang , **Jun Ma\***, Wang Zhenghui, Shi Fengmei, Liu Qianling. Enhanced Separation Performance of PVDF/PVP-g-MMT Nanocomposite Ultrafiltration Membrane Based on the NVP-Grafted Polymerization Modification of Montmorillonite (MMT). *Langmuir*, 2012(10), 4776-4786.
- (26) Fengmei Shi, Yuxin Ma , **Jun Ma\***. Preparation and characterization of PVDF/TiO<sub>2</sub> hybrid membranes with different dosage of nano-TiO<sub>2</sub>. *Journal of Membrane Science*, 2012(389), 522-531.
- (27) **Jun Ma\***, Zhenghui Wang, Mingbin Pan, Yufeng Guo. A study on the multifunction of ferrous chloride in the formation of poly(vinylidene fluoride) ultrafiltration membranes. *Journal of Membrane Science*, 2009, 341(1-2), 214-224.
- (28) Yang Zhou, Jin Jiang, Yuan Gao, **Jun Ma\***, Su-yan Pang, Juan Li, Xue-Ting Lu, and Li-Peng Yuan. Activation of Peroxymonosulfate by Benzoquinone: A Novel Non-Radical Oxidation Process. *Environmental Science and Technology*, 2015, As soon as possible.
- (29) Yang Song, Jin Jiang, **Jun Ma\***, Su-Yan Pang, Yong-ze Liu, Yi Yang, Cong-wei Luo, Jian-qiao Zhang, Jia Gu, and Wen Qin. ABTS as an Electron Shuttle to Enhance the Oxidation Kinetics of Substituted Phenols by Aqueous Permanganate. *Environmental Science and Technology*, 2015, 49 (19), 11764–11771.
- (30) Gang Wen, Stefan Köttsch, Marius Vital, Thomas Egli\*, and **Jun Ma**. BioMig—A Method to Evaluate the Potential Release of Compounds from and the Formation of Biofilms on Polymeric Materials in Contact with Drinking Water. *Environmental Science and Technology*, 2015, 49 (19), 11659–11669.
- (31) Liwei Chen, Xuchun Li, Jing Zhang, Jingyun Fang, Yanmin Huang, Ping Wang, and **Jun Ma\***. Production of Hydroxyl Radical via the Activation of Hydrogen Peroxide by Hydroxylamine. *Environmental Science and Technology*, 2015, 49 (17), 10373–10379.
- (32) Yi Yang, Jin Jiang, Xinglin Lu, **Jun Ma\***, and Yongze Liu. Production of Sulfate Radical and Hydroxyl Radical by Reaction of Ozone with Peroxymonosulfate: A Novel Advanced Oxidation Process. *Environmental Science and Technology*, 2015, 49 (12), pp 7330–7339.
- (33) Pengchao Xie, **Jun Ma\***, Wei Liu, Jing Zou, Siyang Yue, Xuchun Li, Mark R. Wiesner, Jingyun Fang. Removal of 2-MIB and geosmin using UV/persulfate: Contributions of hydroxyl and sulfate radicals. *Water Research*, 2015, 69(1), 223-233.
- (34) Xuchun Li, Jingyun Fang, Guifang Liu, Shujuan Zhang, Bingcai Pan, **Jun Ma\***. Kinetics and efficiency of the hydrated electron-induced dehalogenation by the sulfite/UV process. *Water Research*, 2014, 62(1), 220-228.
- (35) Yongze Liu, Jin Jiang, **Jun Ma\***, Yi Yang, Congwei Luo, Xiaoliu Huangfu, Zhongkai Guo. Role of the propagation reactions on the hydroxyl radical formation in ozonation and peroxone (ozone/hydrogen peroxide) processes. *Water Research*, 2015, 68(1), 750-758.
- (36) Congwei Luo, **Jun Ma\***, Jin Jiang, Yongze Liu, Yang Song, Yi Yang, Yinghong Guan, Daoji Wu. Simulation and comparative study on the oxidation kinetics of atrazine by UV/H<sub>2</sub>O<sub>2</sub>, UV/HSO<sub>5</sub><sup>-</sup> and UV/S<sub>2</sub>O<sub>8</sub><sup>2-</sup>. *Water Research*, 2015, 80(1), 99-108.
- (37) Jin Jiang, Yuan Gao, Su-Yan Pang, Qiang Wang, Xiaoliu Huangfu, Yongze Liu, and **Jun Ma\***. Oxidation of Bromophenols and Formation of Brominated Polymeric Products of Concern during Water Treatment with Potassium Permanganate. *Environmental Science and*

**Technology**, 2014(18), 10850–10858.

- (38) Su-Yan Pang, Jin Jiang\*, Yuan Gao, Yang Zhou, Xiaoliu Huangfu, Yongze Liu, and **Jun Ma\***. Oxidation of Flame Retardant Tetrabromobisphenol A by aqueous Permanganate: Reaction Kinetics, Brominated Products, and Pathways. **Environmental Science and Technology**, 2014, 48 (1), 615–623.
- (39) Xixin Lu, Xiaoliu Huangfu, Xiang Zhang, Yaan Wang, **Jun Ma\***. Strong enhancement of trace mercury removal from aqueous solution with sodium thiosulfate by in situ formed Mn–(hydr)oxides. **Water Research**, 2014, 22–31.
- (40) Jing Zou, **Jun Ma\***, Liwei Chen, Xuchun Li et al, Rapid Acceleration of Ferrous Iron/Peroxymonosulfate Oxidation of Organic Pollutants by Promoting Fe(III)/Fe(II) Cycle with Hydroxylamine. **Environmental Science and Technology**, 2013(20), 11685–11691.
- (41) Xiaoliu Huangfu, JinJiang, **Jun Ma\*** et al. Aggregation kinetics of manganese dioxide colloids in aqueous solution: influence of humic substances and biomacromolecules. **Environmental Science and Technology**, 2013(18), 10285–92.
- (42) Ying-Hong Guan, **Jun Ma\*** et al. Efficient degradation of atrazine by magnetic porous copper ferrite catalyzed peroxymonosulfate oxidation via the formation of hydroxyl and sulfate radicals. **Water Research**, 2013(14), 5431–5438.
- (43) Jin Jiang, Su-YanPang, **Jun Ma\***, Liu Huiling. Oxidation of Phenolic Endocrine Disrupting Chemicals by Potassium Permanganate in Synthetic and Real Waters. **Environmental Science and Technology**, 2012(3), 1774–1781.
- (44) Ying-Hong Guan, **Jun Ma\***, Xu-Chun Li, Jing Yun Fang, LiWei Chen, Influence of pH on the Formation of Sulfate and Hydroxyl Radicals in the UV/Peroxymonosulfate System. **Environmental Science and Technology**, 2011(21), 9308–9314.
- (45) Liwei Chen, **Jun Ma\***, Xuchun Li et al. Strong Enhancement on Fenton Oxidation by Addition of Hydroxylamine to Accelerate the Ferric and Ferrous Iron Cycles. **Environmental Science and Technology**, 2011(9), 3925–3930.
- (46) Suyan Pang, Jiang Jin, **Jun Ma\***. Oxidation of Sulfoxides and Arsenic (III) in Corrosion of Nanoscale Zero Valent Iron by Oxygen: Evidence against Ferryl Ions(Fe(IV)) as Active Intermediates in Fenton Reaction. **Environmental Science and Technology**, 2011(1), 307–312.
- (47) Su-Yan Pang, JinJiang, **Jun Ma\***. Response to Comment on "Oxidation of Sulfoxides and Arsenic(III) in Corrosion of Nanoscale Zero Valent Iron by Oxygen: Evidence against Ferryl Ions (Fe(IV)) as Active Intermediates in Fenton Reaction". **Environmental Science and Technology**, 2011(7), 3179–3180.
- (48) Jin Jiang, Suyan Pang, **Jun Ma\***. Role of ligands in permanganate oxidation of organics. **Environmental Science and Technology**, 2010(44), 4270–4275.
- (49) Zhengqian Liu, **Jun Ma** et al. Influence of different heat treatments on the surface properties and catalytic performance of carbon nanotubes in ozonation. **Applied Catalysis B: Environmental**, 2010(101), 74–80.
- (50) Lei Zhao, Zhizhong Sun, **Jun Ma\***, Huiling Liu. Enhancement mechanism of heterogeneous Catalytic ozonation by cordierite-supported copper for the degradation of nitrobenzene in aqueous solution. **Environmental Science and Technology**, 2009(43), 2047–2053.
- (51) Suyan Pang, Jin Jiang, **Jun Ma\***. New insight into the oxidation of arsenite by the reaction of zerovalent iron and oxygen. Comment on pH Dependence of Fenton Reagent Generation and As(III) Oxidation and Removal by Corrosion of Zero Valent Iron in Aerated Water.

***Environmental Science and Technology***, 2009(43), 3978-3979.

- (52) Lei Zhao, Zhizhong Sun, **Jun Ma\***. Novel relationship between hydroxyl radical initiation and surface group of ceramic honeycomb supported metals for the catalytic ozonation of nitrobenzene in aqueous solution. ***Environmental Science and Technology***, 2009(43), 4157-4163.
- (53) Lei Zhao, **Jun Ma\***, Xuedong Zhai. Synergetic effect of ultrasound with dual fields for the degradation of nitrobenzene in aqueous solution. ***Environmental Science and Technology***, 2009(43), 5094-5099.
- (54) Jin Jiang, Suyan Pang, **Jun Ma\***. Oxidation of triclosan by permanganate (Mn(VII)): Importance of ligands and in situ formed manganese oxides. ***Environmental Science and Technology***, 2009(43), 8326-8331.
- (55) Di He, Xiaohong Guan, **Jun Ma\***, Min Yu. Influence of different nominal molecular weight fractions of humic acids on phenol oxidation by permanganate. ***Environmental Science and Technology***, 2009(43), 8332-8337.
- (56) Xiaohong Guan, Haoran Dong, **Jun Ma**, Li Jiang. Removal of arsenic from water: Effects of competing anions on As(III) removal in KMnO<sub>4</sub>-Fe(II) process. ***Water Research***, 2009(43), 3891-3899.
- (57) Xiaohong Guan, **Jun Ma**, Haoran Dong, Li Jiang. Removal of arsenic from water: Effect of calcium ions on As(III) removal in the KMnO<sub>4</sub>-Fe(II) process. ***Water Research***, 2009(43), 5119-5128.
- (58) Jin Jiang, Suyan Pang, **Jun Ma\***. Dechlorination of chlorophenols mediated by carbon nanotubes in the presence of oxygen. ***Carbon***, 2009(47), 2115-2117.
- (59) Lei Zhao, **Jun Ma\***, Zhizhong Sun, Huiling Liu. Mechanism of heterogeneous catalytic ozonation of nitrobenzene in aqueous solution with modified ceramic honeycomb. ***Applied Catalysis B: Environmental***, 2009(89), 326-334.
- (60) Zhengqian Liu, **Jun Ma\***, Yuhong Cui, Beiping Zhang. Effect of ozonation pretreatment on the surface properties and catalytic activity of multi-walled carbon nanotube. ***Applied Catalysis B: Environmental***, 2009(92), 301-306.
- (61) Lei Zhao, **Jun Ma\***, Zhi-zhong Sun, Xue-dong Zhai. Mechanism of influence of initial pH on the degradation of nitrobenzene in aqueous solution by ceramic honeycomb catalytic ozonation. ***Environmental Science and Technology***, 2008(42), 4002-4007.
- (62) Tao Zhang, Jinfeng Lu, **Jun Ma\***, Zhimin Qiang. Comparative study of ozonation and synthetic goethite-catalyzed ozonation of individual NOM fractions isolated and fractionated from a filtered river water. ***Water Research***, 2008(42), 1563-1570.
- (63) Tao Zhang, Weipeng Chen, **Jun Ma\***, Zhimin Qiang. Minimizing bromate formation with cerium dioxide during ozonation of bromide-containing water. ***Water Research***, 2008(42), 3651-3658.
- (64) Feng Xiao, **Jun Ma\***, Peng Yi, Ju-Chang Howard Huang. Effects of low temperature on coagulation of kaolinite suspensions. ***Water Research***, 2008(42), 2983-2992.
- (65) Zheng-qian Liu, **Jun Ma\***, Yu-Hong Cui. Carbon nanotube supported platinum catalysts for the ozonation of oxalic acid in aqueous solutions. ***Carbon***, 2008(46), 890-897.
- (66) Lei Zhao, **Jun Ma\***, Zhi-zhong Sun, Xue-dong Zhai. Catalytic ozonation for the degradation of nitrobenzene in aqueous solution by ceramic honeycomb supported manganese. ***Applied Catalysis B: Environmental***, 2008(83), 256-264.

- (67) Tao Zhang, Chunjuan Li, **Jun Ma\***. Surface hydroxyl groups of synthetic alpha-FeOOH in promoting (OH)-O-center dot generation from aqueous ozone: Property and activity relationship. ***Applied Catalysis B: Environmental***, 2008(82), 131-137.
- (68) Lei Zhao, **Jun Ma\***, Zhizhong Sun. Oxidation products and pathway of ceramic honeycomb-catalyzed ozonation for the degradation of nitrobenzene in aqueous solution. ***Applied Catalysis B: Environmental***, 2008(79), 244-253.
- (69) **Jun Ma\***, Jin Jiang. Adsorptive fractionation of humic acid at air-water interfaces. ***Environmental Science and Technology***, 2007(41), 4959-4964.
- (70) Jin Guo, **Jun Ma\***. AFM study on the sorbed NOM and its fractions isolated from river Songhua. ***Water Research***, 2006(40), 1975-1984.
- (71) **Jun Ma\***, Sui M.H. et al. Effect of pH on MnO<sub>x</sub>/GAC catalyzed ozonation for degradation of nitrobenzene. ***Water Research***, 2005(39), 779-786.
- (72) **Jun Ma\***. Effectiveness and mechanism of potassium ferrate(VI) preoxidation for algae removal by coagulation. ***Water Research***, 2002(36), 871-878.
- (73) **Jun Ma\***, Liu W. Effectiveness of ferrate (VI) preoxidation in enhancing the coagulation of surface waters. ***Water Research***, 2002, 36(20), 4959-4962.
- (74) **Jun Ma\***. Degradation of atrazine by manganese-catalysed ozonation-influence of radical scavengers. ***Water Research***, 2000, 34(15), 3822-3828.
- (75) **Jun Ma**, Graham N. Degradation of atrazine by manganese-catalysed ozonation: Influence of humic substances. ***Water Research***, 1999, 33(3), 785-793.
- (76) **Jun Ma**, Graham N. Preliminary investigation of manganese-catalysed ozonation for the destruction of atrazine. ***Ozone Science and Engineering***, 1997(19), 227-240.

#### **AUTHORIZED PATENTS(4 US patents and 115 Chinese patents)**

- (1) **Ma, J.\***; Wang, S.; Li, A., Advanced treatment method of feed water by combination of metal zinc and ozone. **In US Patent** 9,115,015: 2015.
- (2) **Ma, J.\***; Jiang, J.; Pang, S.; Yang, Y.; Zhu, J., Water treatment method by catalyzing ozone with a persulfate. **In US Patent** 9,169,141: 2015.

#### **ORGANIZING INTERNATIONAL CONFERENCES:**

- Organizer and Deputy Chair, Sino-European Membrane Technology Conference Series, Weihai, China, 2008, 2009, 2010, 2011, 2012, 2013.
- Organizer and Co-chair, Sino-Swiss International Workshop on Water Resources Management and Drinking Water Quality Control, 22-26, January, 2008, Harbin, China.
- Organizer and Chair, International Conference on Novel Processes for Upgrading Water Quality. September 6-8, 2005, Tianjin, China.
- Organizer and Co-Chair, International Ozone Association (IOA) conference, "Advances in Ozone Science and Engineering: Environmental Processes and Technological Application", April 2002, Hong Kong.