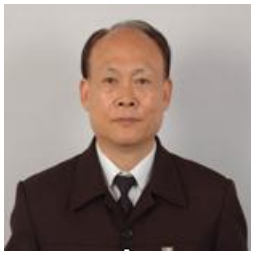
Curriculum Vitae of Ji-Ye Cai

Professor, PhD

State Key Laboratory for Quality Research in Chinese Medicine

Macau University of Science and Technology



Professor Jiye Cai, man, PhD, supervisor of doctoral students. 1962-1968 studied and graduated from Beijing University, Department of Physics;1983-1985, visiting scholar at Columbia University, Columbia Radiation laboratory; He finished his PhD degree from Chinese Academy of Sciences, supervised by professor George W Flynn and Songhao Liu;1992-1994 was senior visiting scholar at Stanford University, Department of Chemistry. He was a major contributor for high resolution, high speed and high sensitivity diode laser probe, and by using this new method, for the first time, obtained vibrationally and rotationally resolved dynamic spectrum of three atom molecule. He participated “hither to the most sophisticated experiment” in physical chemistry----impact parameter dependence of chemical reaction. He and his collaborator had published more than 100 SCI papers, and 6 patents and a book. He was invited to give talks at more than 10 universities and his papers were quoted more than 500 times by other researchers. He had finished 6 Chinese National Natural Science Foundations and Special Foundations by Chinese Department of Science and Technology. He has trained over 60 graduate students and many of them own Yilida Prize, Daheng Prize, Excellent Graduated Students of University of Science and Technology of China and South China Excellent Student Prize. Part of his research results have obtained First Grade Prize of Natural Science of Guangdong Province

(1996), First Grade Prize of Guangdong High Education Bureau (1996) and First Grade Prize of Science and Technology Progress Award (2011).

The research fields of professor Jiye Cai include bionanotechnology, single molecule in situ detection on cell membrane and cell ultrastructures, Quantum Dots marked bio-molecule distribution, and the effect and mechanism of Chinese medicine against cell ultrastructures, etc.

Education:

1962.8-1968.7, Studied at Beijing University, Department of Physics

1983.8-1987.7, PhD, Chinese academy of Science

Professional Chronology：

1979.1-1998.6	Chinese Academy of Sciences, Anhui Institute of Optics and Fine Mechanics, research associate, associate professor, professor, advisor of doctoral students
1983.9-1985.10	Columbia University, Columbia Radiation laboratory; Visiting Scholar
1992.9-1994.1	Stanford University, Department of Chemistry, Senior Visiting Scholar
1994.2-1994.12	UWO University, Chemical Physics Center, Visiting Professor
1998.7-now	Jinan University, Department of Chemistry, Professor, Vice Dean of College of Life Science and Technology
2013-now	State Key Laboratory for Quality Research in Chinese Medicine, Macau University of Science and Technology, Distinguished Professor

Teaching Subjects:

(1) Bionanotechnology (For PhD students)

(2) Nanoscience and technology (For graduated students)

Research Field:

(1) Bionanotechnology

(2) Single molecule in situ detection on cell membrane

(3) Cell ultrastructures

Awards:

(1) First Grade Prize of Natural Science of Guangdong Province (1996)

(2) First Grade Prize of Guangdong High Education Bureau (1996)

(3) First Grade Prize of Science and Technology Progress Award (2011)

Selected Publications and Patents:

1) Huai-Hong Cai,Pei-Hui Yang, HuiWang, Lian-XiHuang, Shi-Xian Wu, Jiye Cai. Label-free oligonucleotide detection method based on a new L-cysteine-dihydroartemisinin complex electroactive indicator. **Electrochemistry Communications**. 2010, 12（10）:1294-1297.
2) MuWang, YuxiaRuan, XiaoboXing, QianChen, YuanPeng, JiyeCai. Curcumin induced nanoscale CD44 molecular redistribution and antigen–antibody interaction on HepG2 cell surface. **Analytica Chimica Acta** 2011, 697:83-89
3) Xiaofang Cai, Xiaoxi Yang, Jiye Cai, ShixianWu, Qian Chen.Atomic Force Microscope-Related Study Membrane-Associated Cytotoxicity in Human Pterygium Fibroblasts Induced by Mitomycin C. **The Jornal of Physical Chemistry.** 2010, 114(11):3833-3839.
4) Jiang Pi,Hua Jin, Jiye Cai, et al. Pathway of cytotoxicity induced by folic acid modified selenium nanoparticles in MCF-7 cells. **Appl Microbiol Biotechnol** (2013) 97:1051– 1062
5) Hua Jin, Jiang Pi, Jiye Cai, et al. BMP2 promotes migration and invasion of breast

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24) Mou C, Chen L. Battle for Pluripotency: Derivation of Induced Pluripotent Stem Cells. Recent Patents on Regenerative Medicine. 2011, 1:123-130

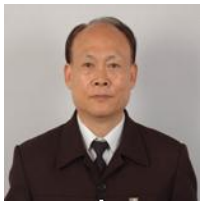
25) Zhang Y, Ouyang D, Xu L, Ji Y, Zha Q, Cai J, He X. Cucurbitacin B induces rapid depletion of the G-actin pool through reactive oxygen species-dependent actin aggregation in melanoma cells. Acta Biochim Biophys Sin. 2011,43(7)

	Inventor	Patent Number	Patent Name
1	蔡继业、汪晨熙	ZL01127891.9	离子质谱违禁物品探测装置、方法及用途
2	蔡继业、陈勇	ZL01114802.0	制备氧化铬超细粉的方法及其装置
3	蔡继业、丁佩贤	ZL91101750.X	激光多光子离解法制备氧化铬超细粉及其装置
4	王浩、蔡继业	ZL200710032492.2	一种进场光学显微镜探针的制备方法
5	王浩、蔡继业	ZL200710032481.8	一种白色发光二极管的封装方法
6	胡安斌、蔡继业	ZL03139762.X	胚胎干细胞定向诱导分化为肝细胞的方法
7	杨培慧、蔡继业	ZL200510101264.7	5-氟尿嘧啶/壳聚糖纳米载药微球的制备方法
8	银东脂、蔡继业	ZL200510086599.6	胚胎干细胞源性肝卵圆细胞的体外诱导和分离提纯培养方法
9	蔡继业、钟丽云	ZL91108839.3	激光高温超导开关
10	蔡继业、赵毅	ZL200610165456.9	珍珠小分子团水及其制作方法和应用
11	郭文跃、蔡继业	98225813.5	外触发出光延时稳定的固体激光器的调 Q 电源
12	蔡继业、曾谷城	ZL200510033977.4	用于检测转铁蛋白的免疫电极的制备方法
13	蔡继业、曾谷城	ZL200510033976.X	量子点-转铁蛋白探针标记肿瘤细胞的方法
14	蔡怀鸿、蔡继业	ZL200810220081	复合型硅壳结构的荧光纳米粒子及其制备方法
15	蔡怀鸿、蔡继业	ZL200810220084	复合型硅壳结构的荧光纳米探针及其制备方法和应用

蔡繼業特聘教授

中藥品質研究國家重點實驗室

澳門科技大學



簡介：蔡繼業，男，理學博士，教授，博士生導師，1968 年畢業於北京大學物理系，1983～1985 年到美國哥倫比亞大學輻射實驗室進修，1987 年在 G.W.Flynn 教授和中國科學院安徽光機所劉頌豪教授的聯合指導下，在中國科學院獲得博士學位。1992～1994 年為美國斯坦福大學高級訪問學者。他在發展高分辨、高速、高靈敏度的二極體鐳射探測法上卓有成績，並用這種方法在世界上首次得到了三原子分子的振動、轉動分辨的时间分辨光谱。參加了被稱為“物化領域有史以來最複雜的實驗”－－－碰撞參量對化學反應影響的研究工作。他與同事已在國際、國內的刊物和學術會議上發表了 100 多篇 SCI 論文，六項專利和一本專著。並應邀在國內外十多所大學作學術報告。他和同事的論文已在國際上被引用 500 多次。他已完成了六項國家自然科學基金，一項國家科委特別支持專案等。他已負責培養了六十多名博士和碩士生，有多名獲得中國科學院億利達獎，大珩獎和中國科學技術大學優秀研究生獎，南粵優秀研究生獎等。他的部分成果已獲 96 年廣東省自然科學一等獎，廣東省高教廳科技進步一等獎，2011 年廣州市科技進步一等獎。蔡教授目前的研究領域是生物納米技術，運用 AFM 和 NSOM 直接進行單個分子的探測和單個細胞的超微結構的研究。標記的免疫分子的結構與自組裝，量子點標記的細胞，中藥對癌細胞的作用機制等。目前是科技部 973 重大项目的课题負責人，國家自然科學基金委港澳與海外合作重點基金的中方負責人。

學歷：

1968 年 7 月，北京大學物理系畢業

1987 年 7 月，在美國哥倫比亞大學化學系 G.W. Flynn 教授和中國科學院安徽光機所劉頌豪教授的聯合指導下，在中國科學院獲博士學位。

工作經歷：

1979 年 1 月-1998 年 6 月，中國科學院安徽光機所助研，副研，研究員，博導

其中：

1983 年 9 月-1985 年 10 月，公派至美國哥倫比亞大學輻射實驗室訪問學者

1992 年 9 月-1994 年 1 月，美國斯坦福大學化學系高級訪問學者

1994 年 2 月-1994 年 12 月，加拿大 UWO 大學化學物理中心訪問教授

1998 年 7 月-至今，暨南大學生命科學技術學院化學系教授，博導，曾任生命科學技術學院副院長

2013 年，澳門科技大學中藥品質研究國家重點實驗室特聘教授

授課科目：生物納米技術（博士生），納米科學和技術（碩士生）

研究領域：生物納米技術

獲獎：1996 年廣東省自然科學一等獎；

1996 年廣東省高教廳科技進步一等獎；

2011 年廣州市科技進步一等獎

部分研究論文和專利：

1）Huai-Hong Cai,Pei-Hui Yang, HuiWang, Lian-XiHuang, Shi-Xian Wu, Jiye Cai. Label-free oligonucleotide detection method based on a new L-cysteine-dihydroartemisinin complex electroactive indicator. **Electrochemistry Communications**. 2010, 12（10）:1294-1297.

2) MuWang, YuxiaRuan, XiaoboXing, QianChen, YuanPeng, JiyeCai. Curcumin induced nanoscale CD44 molecular redistribution and antigen–antibody interaction on HepG2 cell surface. **Analytica Chimica Acta** 2011, 697:83-89

3) Xiaofang Cai, Xiaoxi Yang, Jiye Cai, ShixianWu, Qian Chen.Atomic Force Microscope-Related Study Membrane-Associated Cytotoxicity in Human Pterygium Fibroblasts Induced by Mitomycin C. **The Jornal of Physical Chemistry.** 2010, 114(11):3833-3839.
4) Jiang Pi,Hua Jin, Jiye Cai, et al. Pathway of cytotoxicity induced by folic acid modified selenium nanoparticles in MCF-7 cells. **Appl Microbiol Biotechnol** (2013) 97:1051– 1062
5) Hua Jin, Jiang Pi, Jiye Cai, et al. BMP2 promotes migration and invasion of breast cancer cells via cytoskeletal reorganization and adhesion decrease: an AFM investigation **Appl Microbiol Biotechnol** (2012) 93:1715– 1723
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3	蔡继业、丁佩贤	ZL91101750.X	激光多光子离解法制备氧化铬超细粉及其装置
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7	杨培慧、蔡继业	ZL200510101264.7	5-氟尿嘧啶/壳聚糖纳米载药微球的制备方法
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12	蔡继业、曾谷城	ZL200510033977.4	用于检测转铁蛋白的免疫电极的制备方法
13	蔡继业、曾谷城	ZL200510033976.X	量子点-转铁蛋白探针标记肿瘤细胞的方法
14	蔡怀鸿、蔡继业	ZL200810220081	复合型硅壳结构的荧光纳米粒子及其制备方法
15	蔡怀鸿、蔡继业	ZL200810220084	复合型硅壳结构的荧光纳米探针及其制备方法和应用