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基本信息

职称：微电子学院教授、博导、硕导

头衔：广东省南粤优秀教师

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个人简介



博士

【学术型】电子科学与技术（微电子学与固体电子学）

【专业型】电子信息（电子工程）



硕士

【学术型】电子科学与技术（微电子学与固体电子学）

【专业型】电子信息（集成电路工程）

个人简介

姚若河，国家工程技术研究中心副主任，兼任全国试验机标准化技术委员会无损检测技术分委员会委员、广东省真空学会副理事长、广东省物理学会副秘书长、真空科学与技术学报编委，曾任全国信息与电子学科研究生教育委员会理事、汕头市人民政府政务咨询委员等。1977年作为国家恢复高考后的首批大学生考入中山大学无线电物理专业学习，获学士学位，后在中国科学院研究生院获博士学位；曾到麻省理工学院、斯坦福大学等进行学术访问。研究方向为：半导体器件及物理、集成电路设计及可靠性、信号处理技术及应用。指导的研究生曾获全国“挑战杯”特等奖，全国研究生智慧城市技术与创意设计大赛一等奖，全国高校互联网应用创新大赛二等奖，广东省南粤科技创新优秀学术论文二等奖，广东省

优秀博士学位论文和广东省优秀硕士学位论文等。先后主持和参与国家重点研发计划、国家973项目、国家自然科学基金项目、省级重大科技项目等20余项，在IEEE Trans. Electron Devices, IEEE Trans. VLSI和IEEE Trans. Image Process等国内外期刊及学术会议发表研究论文200余篇，授权发明专利15项，曾获广东省科学技术（自然科学）三等奖、原铁道部优秀教材一等奖等。

Prof. Yao Ruohe, deputy director of the National Engineering Technology Research Center, concurrently a member of the Non-destructive Testing Technology Subcommittee of the National Testing Machine Standardization Technical Committee, deputy chairman of the Guangdong Vacuum Society, deputy secretary-general of the Guangdong Physical Society, and editorial board member of the Journal of Vacuum Science and Technology. Served as a member of the National Information and Electronics Postgraduate Education Committee, and a member of the government affairs advisory member of the Shantou Municipal People's Government. In 1977, he was admitted to the radio physics major of Sun Yat-Sen University and received a bachelor's degree, and later received a Ph.D from the Graduate School of the Chinese Academy of Sciences. He once went to MIT, Stanford University and other academic visits. Research directions are: semiconductor devices and physics, integrated circuit design and reliability, signal processing technology and applications. The graduate students who have been instructed have won the national Challenge Cup special prize, the first prize of the National Postgraduate Smart City Technology and Creative Design Competition, the second prize of the National College Internet Application Innovation Competition, the second prize of Guangdong Nanyue Science and Technology Innovation Excellent Academic Paper, Guangdong Province Excellent doctoral dissertation and Guangdong excellent master's dissertation, etc. He has presided over and participated in more than 20 national key research and development projects, national 973 projects, national natural science fund projects, and provincial major scientific and technological projects. Published more than 200 research papers, which were published in academic journals and academic conferences such as IEEE Trans. Electron Devices, IEEE Trans. VLSI and IEEE Trans. Image Process. 15 authorized invention patents. He has won the third prize of Science and Technology (Natural Science) of Guangdong Province and the first prize of Excellent Textbook of the Ministry of Railways of China.

教育经历

1978.02-1982.01 中山大学 本科/学士

2001.02-2004.07 中国科学院研究生院 研究生/博士

工作经历

2002-07 华南理工大学 教授

研究方向

半导体器件及物理

授课课程

模拟电子技术

计算微电子学

学术任职

广东省真空学会副理事长

广东省物理学会副秘书长

广东省电子学会常务理事

全国试验机标准化技术委员会无损检测技术分委员会委员

科研项目

[1]广东省重点领域研发计划项目 大尺寸硅衬底氮化镓基射频功率器件关键技术研究及应用2020/01-2023/06 主持

[2]国家重点研发计划 基于第三代化合物半导体的射频前端系统技术--毫米波GaN 器件及工艺 2019/07-2023/06 主持

[3]广东省应用型科技研发专项资金项目 氮化镓基射频器件研发及产业化2016/01-2020/12主持

[4]广东省重大科技专项 面向可见光通信的宽带高效LED器件核心技术研究2015/01-2018/12主持

[5]国家自然科学基金面上项目 氧化物半导体薄膜晶体管的模型及参数提取方法研究2013/01-2016/12 主持

[6]国家自然科学基金面上项目 多晶硅薄膜晶体管的建模及特性研究 2008/01-2010/12 主持

代表性科研成果 (论文、专利等)

[1]Zhong Wei, **Yao Ruohe**, Liu Yuan, Lan Linfeng, Chen Rongsheng. Effect of Self-Assembled Monolayers (SAMs) as Surface Passivation on the Flexible a-InSnZnO Thin-Film Transistors. *IEEE Trans. Electron Devices*.2020, 67(8):3157-3162

[2] Fu ZW, Zhou B, **Yao RH**, Liu, YR, Li XP. Electromigration Effect on Kinetics of Cu-Sn Intermetallic Compound Growth in Lead-Free Solder Joint. *IEEE Trans. Device & Materials Reliability*.2017, 17(4):773-779.

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[14] 中国发明专利: 基于NFC的公共自行车管理系统及方法, 201510472350.2

[15] 中国发明专利: 一种电容式MEMS传感器检测电路, ZL 201510469374.2

[16] 中国发明专利: 基于无线鼠标的LED控制方法及控制器, ZL 201410084967.2

[17] 中国发明专利: 一种彩色视频的超分辨率处理方法, 201310438358.8

[18] 中国发明专利: 一种铜锌锡硫/硒墨水及其制备方法, 201310691608.9

[19] 中国发明专利: 高增益放大器电路, ZL200910193446.X

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