1997 年，在中国科学技术大学获生物学学士学位，并获化学物理学辅修学位，论文导师：刘海燕教授、施蕴渝院士。1999 年，在普林斯顿大学化学系获硕士学位。2001 年，在普林斯顿大学化学系获博士学位，是施一公教授培养的第一个博士。2001-2003 年，在 Memorial Sloan Kettering 癌症中心做博士后，师从 Nikola Pavletich 院士。2003-2008 年在哈佛大学医学院附属儿童医院做博士后，师从贺熹教授。2008 年任上海交通大学教授，独立建立了上海交通大学第一个结构生物学实验室。参与了上海交通大学微生物代谢国家重点实验室的创建。2019 年承办了第六届华东地区结构生物学会议。现为上海生物物理学会理事。合成生物学重点专项课题组长。

在 ***Science***、***Nature***、***Nature Microbiology***、***Nature Communications***（3 篇）、***Molecular Cell***（2 篇）、***Cell Research***、***Nucleic Acids Research***、***Journal of Molecular Cell Biology***、***Cell Discovery***（3 篇）、***mBio***（2 篇）、***Molecular Microbiology***（2 篇）等发表第一作者获通讯作者论文，被引用 2500 余次。APC-Asef 复合物结构论文被英国皇家学会院士 Mariann Bienz 选入生物医药类论文权威数据库 Faculty of 1000，并在此基础上与同事合作开发抑制结肠癌细胞迁移的化合物（***Nature Chemical Biology***, 2017）。获教育部自然科学一等奖（2016）、教育部新世纪优秀人才（2009）、上海市东方学者（2008）、上海市东方学者跟踪计划（2014）、上海市曙光学者（2008）、上海市浦江人才（2009）、美国白血病与淋巴癌学会 Special Fellowship（2005）。指导学生获上海市优秀博士论文（2014）。

目前主要研究领域为合成生物学与生物物理化学，研究方向包括细胞生命重构、拟蛋白质设计、蛋白质类抗癌药物开发、蛋白质设计、与癌症相关的蛋白质机器的冷冻电镜结构等。

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