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个人简介

张东伟，河南开封人，副教授，硕士生导师，2013年获西安交通大学动力工程及工程热物理专业博士学位。郑州大学动力工程及工程热物理专业博士后，美国堪萨斯大学访问学者，江苏省“双创博士”技术人才，河南省科学技术协会青年托举人才，郑州大学青年骨干教师。从事热力系统能量转换、固体废物资源化与污染控制、制冷热泵技术和强化传热技术方面的研究，承担国家自然科学基金1项，河南省高等学校重点科研项目1项，高等学校能源动力类新工科研究与实践项目1项，江苏省绿色过程装备重点实验室开放课题1项，参与国家自然科学基金项目3项、承担和参与地方及企业合作项目9项。发表论文60余篇，教研论文近10篇，参编专业教材2部，承担Energy Conversion and Management、 Energy、 International Journal of Heat and Mass Transfer、 Applied Thermal Engineering等多个期刊的审稿工作。

指导研究生获得国家奖学金、三好研究生、优秀毕业生、中国制冷空调竞赛河南省二等奖，毕业生有多人进入香港中文大学（深圳）、上海交通大学、西安交通大学、重庆大学等继续攻读博士学位；指导本科生在国际期刊发表学术论文，申请发明专利；指导本科生获全国大学生节能减排社会实践与科技竞赛金奖（国际赛道），美国数学建模竞赛一等奖、二等奖多项，获国家级科技创新比赛特等奖、一等奖和二等奖多项，多名本科生获得科研训练和实践创新基金项目资助。

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研究领域及方向

1. 传热传质强化节能技术
2. 热力系统能量转换技术
3. 新型制冷热泵技术
4. 固体废物资源化与污染控制

近年来承担的科研项目

1. 国家自然科学基金委员会，青年项目，51706208，超声波激励下脉动热管的启动特性及多场耦合强化的机理研究，2018.01-2020.12，主持
2. 江苏省绿色过程装备重点实验室，开放课题基金项目，压缩喷射式跨临界CO2热泵系统研究，2021.01-2022.12，主持
3. 河南省科学技术协会，青年人才托举项目，2020HYTP023，带回热器的跨临界二氧化碳热泵-热水系统综合性能的实验研究，2020.01-2021.12，主持
4. 河南省教育厅，高等学校重点科研项目，16A480011，多物理场耦合作用下超声波强化传热机理与实验研究，2016.01-2017.12，主持
5. 江苏省科技厅，“双创博士”科技副总项目，2016.01-2017.12，主持
6. 郑州大学青年骨干教师培养计划，超声波强化微通道换热的空化效应及多场耦合机理研究，2021.01-2023.12，主持
7. 郑州大学培育基金项目，超声波强化微通道相变换热的空化效应及多场耦合机理研究，2021，主持
8. 垃圾焚烧电厂烟气污染物处理系统开发，横向项目，2023-2024，主持
9. 二噁英低温裂解微观过程技术研究，横向项目，2023，主持
10. 《20万吨/年苯加氢项目》节能评估，横向项目，2022，主持

近年来承担和参与的教学改革项目

1. 教育部高等学校能源动力类专业教学指导委员会研究与实践项目，高等学校能源动力类新工科研究与实践项目，NDXGK2017Y-66，基于大学生科创大赛的新工科培养模式探索，2018.01-2019.12，主持
2. 郑州大学教学改革类项目，基于科创比赛的大学生创新实践能力培养研究，2022.08-2024.07，主持
3. 教育部高等学校能源动力类教指委教学研究与实践项目，NSJZW2021Y-44，《传热学》混合式金课建设的研究与实践，2022.01-2023.12，参与
4. 教育部高等学校能源动力类教指委教学研究与实践项目，NSJZW2021Y-112，多尺度模拟在能源动力类课程教学中的应用， 2022.01-2023.12，参与
5. 河南省本科高等学校精品在线开放课程项目《传热学》，2021，参与

近五年来发表的代表性论文及成果

［1］Numerical study on solar heating system with different auxiliary heat sources. Thermal Science and Engineering Progress. 2024. 54: 102845. https://doi.org/10.1016/j.tsep.2024.102845.

［2］Parametric study and optimization of H-type finned tube heat exchangers with honeycomb arrangement using Taguchi method. Applied Thermal Engineering. 2024. 256: 124116. https://doi.org/10.1016/j.applthermaleng.2024.124116.

［3］Experimental study of heat transfer performance in rectangular microchannels enhanced by ultrasound. International Journal of Heat and Mass Transfer. 2024. 228: 125626. https://doi.org/10.1016/j.ijheatmasstransfer.2024.125626.

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[5] 4E analysis and parameter study of a solar-thermochemical energy storage CCHP system. Energy Conversion and Management. 2024, 301C: 118002. https://doi.org/10.1016/j.enconman.2023.118002.
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[11] Studying the performance of phase change heat storage enhanced by ultrasonic energy. Applied Thermal Engineering. 2023. 231: 120920. https://doi.org/10.1016/j.applthermaleng.2023.120920.
[12] Experimental study on the parallel-flow heat pipe heat exchanger for energy saving in air conditioning. Journal of Building Engineering. 2023. 75: 106842. https://doi.org/10.1016/j.jobe.2023.106842.
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[14] Energy, environmental and economic assessment of wastewater heat recovery systems in hotel buildings. Applied Thermal Engineering. 2023. 222: 119949. https://doi.org/10.1016/j.applthermaleng.2022.119949.
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[37] 平行流热管管内流动与传热的数值模拟研究. 热科学与技术. 2023.
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［42］回热对跨临界CO_2热泵系统性能影响的实验研究. 工程热物理学报. 2020 41(01):188-197.

专利

[1] 一种新型立式双缸电磁活塞压缩机. 河南: CN220365687U, 2024-01-19.

[2] 一种新型立式电磁活塞压缩机. 河南: CN220337026U, 2024-01-12.

［3］一种新型双缸电磁旋转活塞压缩机. 河南: CN114251262B, 2023-03-28.

［4］一种基于脉动热管翅片的平疫两用供暖空调系统. 河南: CN218583352U, 2023-03-07.

［5］一种混合动力汽车发动机和电池余热回收系统. 河南: CN215213718U, 2021-12-17.

［6］一种用于大功率充电桩的新型脉动热管翅片联合散热结构. 河南: CN215204475U, 2021-12-17.

［7］一种基于高温沙粒的余热回收冷热电联供系统. 河南: CN204536088, 2021-10-29.

［8］一种用于地下空间的太阳能除湿系统. 河南：CN202870039U, 2021-04-02.

［9］基于脉动热管的混凝土冷却系统. 河南：CN211714597U，2020-10-20.

教材编著

［1］过程装备安全技术. 化学工业出版社. 2018.

［2］过程装备智能制造基础. 化学工业出版社. 2022.

主讲课程

工程流体力学基础（+线上MOOC）、工程热力学（+线上MOOC）、高等流体力学、高级制冷热泵技术、能源转换技术与清洁替代能源、化工材料防腐

荣誉与奖励

[1] 第七届、第八届全国大学生过程装备实践与创新大赛“优秀指导教师”（2016、2017）

[2] 基于R410a制冷剂的新型多联供系统安全可靠性研究. 河南省第四届安全科技成果奖一等奖. 2021

[3] 精细化工企业典型设备失效机理与工艺安全评价技术. 周口市科学技术进步奖二等奖. 2021

[4] 小型制冷设备共性关键技术及产业化. 河南省教育厅科技成果奖一等. 2024

上一篇：范忠雷

下一篇：王永庆