

导师简介

姓名	王日冉	性别	女	出生年月	1990.02	
职称	副研究员	民族	汉	籍贯	河南潢川	
电子邮箱	wangrr@zzu.edu.cn			最终学位	博士	
学术头衔/兼职	无					
研究方向	沥青路面材料					
主要学习 科研和工 作经历	2022.10 至今	郑州大学	黄河实验室（郑州大学） 副研究员			
	2020.07-2022.09	郑州大学	力学博士后流动站 博士后			
	2016.09-2020.07	郑州大学	水工结构工程 博士			
	2014.09-2016.07	郑州大学	道路与铁道工程 硕士			
	2010.09-2014.07	华北水利水电大学	水利水电工程 本科			
代表性 科研成果	<p>一、科研项目</p> <p>(1) 中国博士后面上项目（主持，No.2023M743190）</p> <p>(2) 中国博士后面上项目（主持，No.2021M692918）</p> <p>(3) 河南省自然科学基金青年项目（主持，No.222300420308）</p> <p>(4) 黄河实验室（郑州大学）一流课题青年托举项目（主持，No.YRL22YL05）</p> <p>(5) 低碳环保与耐久性沥青改性关键技术研究及应用横向项目（主要完成人，150万）</p> <p>二、论文论著</p> <p>(1) Wang Riran, An Xin*, Yue Jinchao, A proposed approach for accurate fatigue quantification of the base asphalt binders coupling nonlinear viscoelastic effects in S-VECD theoretical framework[J]. <i>Construction and Building Materials</i>, 2023, 392: 131850. (一区 Top)</p> <p>(2) Wang Riran, Yue Mingjing, Xiong Yuchao, Yue Jinchao*, Experimental study on mechanism, aging, rheology and fatigue performance of carbon nanomaterial/SBS-modified asphalt binders[J]. <i>Construction and Building Materials</i>, 2021, 268: 121189. (一区 Top)</p> <p>(3) Wang Riran, Qi Zemin, Li Ruixia, Yue Jinchao*, Investigation of the effect of aging on the thermodynamic parameters and the intrinsic healing capability of graphene oxide modified asphalt binders[J]. <i>Construction and Building Materials</i>, 2020, 230: 116984. (一区 Top)</p> <p>(4) Wang Riran, Xiong Yuchao, Yue Mingjing, Hao Meimei, Yue Jinchao*, Investigating the effectiveness of carbon nanomaterials on asphalt binders from hot storage stability, thermodynamics, and mechanism perspectives[J]. <i>Journal of Cleaner Production</i>, 2020, 276: 124180. (一区 Top)</p> <p>(5) Wang Riran, Xiong Yuchao, Ma Xiaopeng, Guo Yajun, Yue Mingjing, Yue Jinchao*,</p>					

- Investigating the differences between steel slag and natural limestone in asphalt mixes in terms of microscopic mechanism, fatigue behavior and microwave-induced healing performance[J]. *Construction and Building Materials*, 2022, 328: 127107. (一☒ Top)
- (6) An Xin, **Wang Riran***, Kang Xiaolong, Yue Jinchao, A more accurate fatigue characterization of GO-modified asphalt binder considering non-linear viscoelastic behaviour and UV exposure effects[J]. *International Journal of Fatigue*, 2023, 168: 107396. (一☒ Top)
- (7) Yue Mingjing, Yue Jinchao, **Wang Riran***, Xiong Yuchao, Evaluating the fatigue characteristics and healing potential of asphalt binder modified with Sasobit® and polymers using linear amplitude sweep test[J]. *Construction and Building Materials*, 2021, 289: 123054. (一☒ Top)
- (8) **Wang Riran**, Sha Tianyu , Xiong Yuchao, Cai Yingchun, Yue Jinchao, Wang Haopeng*, Potential contribution of steel slag fillers to asphalt mastic in terms of microwave heating efficiency, electromagnetic mechanisms and fatigue durability[J]. *International Journal of Pavement Engineering*, 2023, 24(1): 2240471. (二☒)
- (9) **Wang Riran**, Cai Yingchun, Li Jinlong*, Zhai Ming, Wang Xiaofeng, Revealing the thermodynamic characteristics, bonding behaviour and failure patterns of the asphalt-aggregate interface containing SBS/CNT micro-nanoparticles at the molecular scale[J]. *Journal of Materials in Civil Engineering*, 2023. Forthcoming, DOI: 10.1061/JMCEE7/MTENG-15733. (三☒)
- (10) **Wang Riran**, Yue Jinchao*, Li Ruixia, Sun Yang, Evaluation of aging resistance of asphalt binder modified with graphene oxide and carbon nanotubes[J]. *Journal of Materials in Civil Engineering*, 2019, 31(11): 04019274. (三☒)
- (11) Kang Xiaolong, **Wang Riran***, Yue Jinchao, An Xin, Tang Guoqi. Investigation of the adhesion characteristics of a novel fast-melting SBS-based modifier to asphalt-aggregate systems based on a multi-scale approach[J]. *Journal of Materials in Civil Engineering*, 2023, 35(12): 04023435. (三☒)
- (12) Yue Mingjing, Yue Jinchao, **Wang Riran***, Guo Yajun, Ma Xiaopeng. A comprehensive analysis of fatigue-fracture and healing capacity of Sasobit®/polymer-modified asphalt from two perspectives: binder and fine aggregate matrix[J]. *Journal of Materials in Civil Engineering*, 2022. Forthcoming, DOI: 10.1061/(ASCE)MT.1943-5533.0004655. (三☒)
- (13) Zhai Ming, Li Jinlong, **Wang Riran***, Yue Jinchao, Wang Xiaofeng, Revealing mechanisms of aging and moisture on thermodynamic properties and failure patterns of asphalt-aggregate interface from the molecular scale[J]. *Journal of Materials in Civil Engineering*, 2022. Forthcoming, DOI: 10.1061/(ASCE)MT.1943-5533.0004656. (三☒)
- (14) Li Ping, Wang Ziran, Men Bo, Ma Xiaopeng, Tang Guoqi, **Wang Riran***, Use of multi-scale investigation to evaluate adhesion performance of warm-mix polymer-modified asphalt[J]. *Materials*, 2023, 16: 287. (三☒)
- (15) Zhuang Yazhou, Yue Jinchao, Men Bo, Tang Guoqi, **Wang Riran***, Experimental study on mechanism, aging and fatigue performance of warm mixing speed melting SBS modified asphalt binders[J]. *Coatings*, 2023, 13(2): 311. (三☒)
- (16) Huo Weiguang, Zhuang Yazhou, Wang Ziran, Kang Xiaolong, **Wang Riran***, The microscopic mechanism and rheological properties of SBS-modified asphalt with warm mixing fast-melting[J]. *Materials*, 2023, 16(16): 5690. (三☒)

(17) Wang Decai, Sun Yang, **Wang Riran**, Li Ruixia, Yue Jinchao*, Effect of evaporation methods on modified emulsified asphalt residues from rheological and chemical characteristics[J]. Journal of Materials in Civil Engineering, 2023, 35(5): 04023071. (三区)

(18) Sun Yang, Yue Jinchao, **Wang Riran**, Li Ruixia, Wang Decai*, Investigation of the effects of evaporation methods on the high-temperature rheological and fatigue performances of emulsified asphalt residues[J]. *Advances in Materials Science and Engineering*, 2020, 2020: 4672413. (四区)

三、授权专利

(1) 发明专利:《一种动水压力下沥青路面渗水性能试验方法》(专利号 202111434635.9, 公开阶段, 排名第一)

(2) 发明专利:《一种有对照组的沥青紫外老化试验方法》(专利号 202111434654.1, 公开阶段, 排名第二)

(3) 实用新型专利:《一种动水压力下沥青路面渗水性能试验装置》(专利号 202122952974.8, 已授权, 排名第二)

四、科技奖励

2023 年度河南省教育厅科技成果奖优秀科技论文奖 (壹等奖)

2022 年度河南省教育厅科技成果奖优秀科技论文奖 (壹等奖)