



周四的交流分享

黄杰

2022.10.27





自我介绍

2012-2016 西华师范大学 数电学院 电子信息工程专业 本科

2018-2019 北京航空航天大学 软物质中心 联合培养 研究生

2018-2021 温州大学 数理学院 凝聚态物理专业 研究生 导师: **李士本** 教授

2022- 现在 澳门大学 应用物理和材料工程学院 科研助理



2018.5-今

用深度学习的方法求解扩散方程(合作:北航 陈宇国)

2018.6-2018.7

用无监督学习寻找高分子链的相转变点(合作:北航 徐鑫)

2018.9-2018.12

用深度学习做眼角膜图像分类(合作:滑铁卢大学陈征宇教授 温州医科大学 沈梅晓研究员)

2019.9-2019.11

北航化学系本科2016级
《C语言程序设计》助教
(合作:北航 蒋滢研究员)

2018.5-2019.11

北航软物质中心Linux集群管理员(合作:北航 黄韬博士)

Neural network model for structure factor of polymer systems

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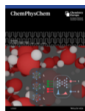
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A Machine Learning Model to Classify Dynamic Processes in Liquid Water**

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The dynamics of water molecules plays a vital role in understanding water. We combined computer simulation and deep learning to study the dynamics of H-bonds between water molecules. Based on *ab initio* molecular dynamics simulations and a newly defined directed Hydrogen (H-) bond population operator, we studied a typical dynamic process in bulk water: interchange, in which the H-bond donor reverses roles with the

acceptor. By designing a recurrent neural network-based model, we have successfully classified the interchange and breakage processes in water. We have found that the ratio between them is approximately 1:4, and it hardly depends on temperatures from 280 to 360 K. This work implies that deep learning has the great potential to help distinguish complex dynamic processes containing H-bonds in other systems.

2021.9-2022.7

申请博士 找工作 练英语 拍视频

独自生活, 看红楼梦

博士申请

0. 京都大学, 计算物理 ✖
1. Germany Sound + Machine learning ✖
2. Gneve Machine learning + Particle Physics ?
3. CLS ETH + Max Planck, Machine Learning ?
4. Ph.D. position – Hybrid Physics-Neural Network Soft Sensors for Dynamic Process Operation (DFG Project) ✖
5. Doctoral Candidate in computational physics, Aalto, Finland ✖
6. Ph.D. position in Computer Simulations and Machine learning Soft Matter (1.0 FTE) Netherlands ?
7. Ph.D. and PostDoc Positions in Machine Learning and Data Analytics. Germany. ✖
8. Doctoral School for Dependable Electronic-Based Systems, Graz University of Technology, 嵌入式机器学习 ✖
9. 澳门大学 蔡永青 材料模拟计算 本科学历(60%) ●
10. 福井大学 张潮 计算机视觉 <http://www.labzhang.com/> ? ●
11. 意大利 ICTP, Ali Hassanali, 水+机器学习 过了材料筛选和笔试, 面试差一分。2023年还有名额。✖
12. Aalto University, Finland Prof. Adam Foster Doctoral Researcher positions in Computational Physics and Machine Learning ●
13. USA University of South Carolina 材料模拟计算 ●



谢谢！

