

北京師範大學物理與天文學院

SCHOOL OF PHYSICS AND ASTRONOMY, BEIJING NORMAL UNIVERSITY

# Title: 40 years of development on plasma wakefield acceleration

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## | Abstract |

Plasma wakefield acceleration (PWFA) holds great promise to reduce the footprint and cost of next generation free electron laser facilities and future high energy colliders due to its orders of magnitude higher accelerating gradient compared to conventional accelerators. This concept has been proposed for 40 years. In this talk, we will review the important milestones achieved and current development from different schemes include electron beam-driven PWFA, positron beam-driven PWFA and proton beam-driven PWFA. The future perspectives of this technology will also be discussed.

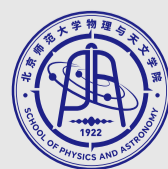
## | 嘉宾简介 |

获英国曼彻斯特大学永久教职，目前任CERN AWAKE国际合作组 Publications and Speakers Committee 主席，欧洲先进粒子加速委员会成员 (EAAC)，欧洲地平线资助项目EuPRAXIA (Horizon 2020 Funded)的分系统负责人，英国等离子体尾场加速指导委员会(Plasma Wakefield Accelerators Steering Committee-PWASC UK)和创始成员和核心成员。作为首席科学家，目前正在主持和已主持大型国际合作项目包括CERN AWAKE, EU EuPRAXIA和英国科学和设施理事会STFC (Science and Technology Facility Council)资助的等离子体尾场加速PWFA以及电介质加速DWA (Dielectric Wakefield Accelerator)，资助金额约 £ 6.3M。目前已在各类国际学术期刊发表研究论文200余篇。其中多篇文章发表在国际顶级期刊，包括Nature, Physical Review Letters等，发表的文章被引用3800余次。同时也是 Nature Communications (NC), Physical Review Letters (PRL), Physical Review Accelerators and Beams (PRAB)等国际期刊的审稿人。

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2026年 4月16日 15:30-17:00

地点：物理楼105



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