Preface

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We are delighted to introduce Vol. 17, No. 2, 2026 of the *International Journal of Power and Energy Conversion* (*IJPEC*). At the outset, we would like to express our deepest gratitude to the editorial board, the journal management team, and the reviewers for their continued efforts, constructive feedback, and commitment to upholding the scientific rigor and quality of the journal. We also sincerely thank the authors for their trust and for contributing their valuable research to this issue.

This edition brings together a selection of innovative articles that explore energy conversion, renewable energy technologies, radiation applications, and intelligent systems for power management. The diversity of topics reflects the multi-disciplinarity and dynamism of current research in the fields of power and energy.

The first article, 'Evaluation of moisture content in paper using neutron energy: a laboratory experiment and simulation', presents an original approach that combines experimental and simulation methods to assess moisture in materials, highlighting neutron applications in industrial and material sciences. The second contribution, 'Innovative approach to improve radiation exposure management in radiology practices at Moroccan healthcare institutions', proposes strategies to enhance radiological safety and optimise patient care.

In the field of renewable energy, the paper 'Analysis of graphene perovskite solar cells using SCAPS-1D' investigates the potential of advanced photovoltaic materials, while 'Enhancement of solar/fuel cell hybrid energy system performance' explores hybrid system optimisation for sustainable power generation.

From the perspective of power systems and smart grids, the article 'Frequency and voltage support for GFLI connected to weak grid using current compensation based on virtual inductance' addresses stability challenges in grid integration, and the final paper, 'Smart grid power demand and supply scheduling to preserve energy wastage using machine learning technique', demonstrates the integration of artificial intelligence into energy management to improve efficiency and reduce waste.

Together, these contributions illustrate the importance of bridging experimental research, innovative technologies, and computational tools in advancing energy sciences. They also emphasise the relevance of interdisciplinary approaches to meet the growing global demand for sustainable, efficient, and safe energy solutions.

We hope that this issue of *IJPEC* will stimulate further dialogue, inspire new research, and foster collaboration across academic, industrial, and institutional sectors.

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