

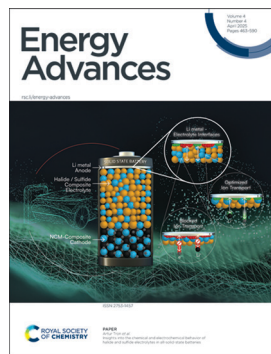
# Energy Advances

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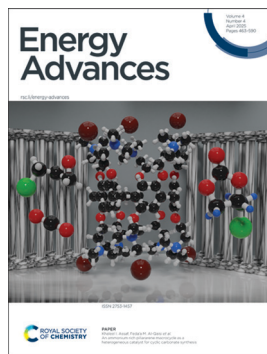
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## IN THIS ISSUE

ISSN 2753-1457 CODEN EANDBJ 4(4) 463-590 (2025)



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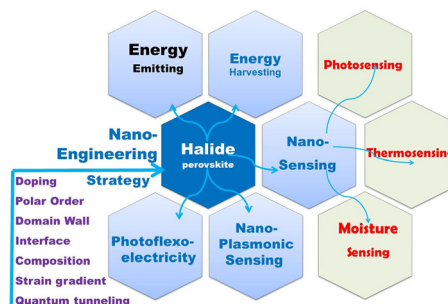
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## REVIEW

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### Nano-engineering halide perovskites: towards energy harvesting, nano-plasmonic sensing and photoflexoelectric applications

Taame Abraha Berhe,\* Etsana Kiros Ashebir,  
Wei-Nien Su\* and Bing Joe Hwang\*

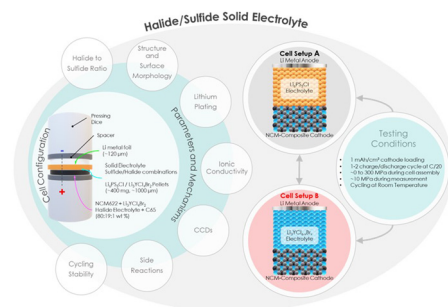


## PAPERS

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### Insights into the chemical and electrochemical behavior of halide and sulfide electrolytes in all-solid-state batteries

Artur Tron,\* Alexander Beutl, Irshad Mohammad and  
Andrea Paoletta



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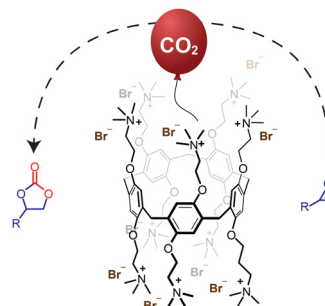
Fundamental questions  
Elemental answers



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### An ammonium rich pillararene macrocycle as a heterogeneous catalyst for cyclic carbonate synthesis

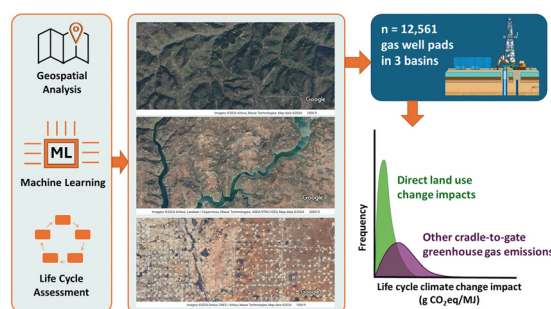
Khaleel I. Assaf,\* Feda'a M. Al-Qaisi,\* Ala'a F. Eftaiha, Abdussalam K. Qaroush, Ahmad M. Ala'mar and Majd M. Al-Fararjeh



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### Well pad-level geospatial differences in the carbon footprint and direct land use change impacts of natural gas extraction

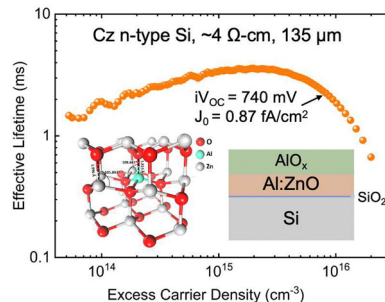
Amir Sharafi and Marie-Odile P. Fortier\*



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### Impact of precursor dosing on the surface passivation of AZO/AlO<sub>x</sub> stacks formed using atomic layer deposition

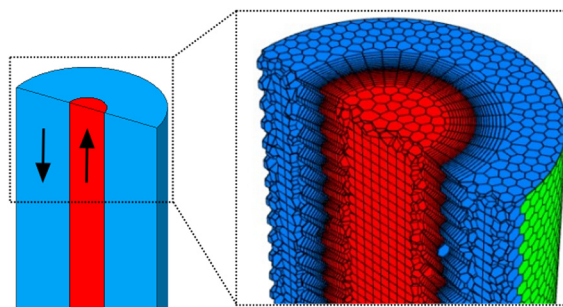
Yan Wang, Theodore D. C. Hobson, Jack E. N. Swallow, Shona McNab, John O'Sullivan, Anastasia H. Soeriyadi, Xinya Niu, Rebekah C. Fraser, Akash Dasgupta, Sourmyajit Maitra, Pietro P. Altermatt, Robert S. Weatherup, Matthew Wright and Ruy S. Bonilla\*

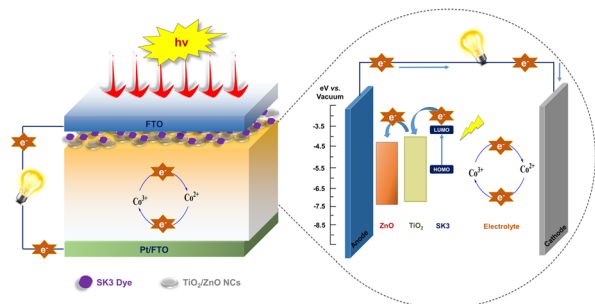


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### Design parameter optimization of a membrane reactor for methanol synthesis using a sophisticated CFD model

Theresa Hauth,\* Konstantin Pielmaier, Vincent Dieterich, Nicolas Wein, Hartmut Spliethoff and Sebastian Fendt





### TiO<sub>2</sub>/ZnO nanocomposites with a metal-free dye and a polymer gel electrolyte: optimizing photovoltaic efficiency and assessing stability *via* time series analysis

Prakash S. Pawar, Pramod A. Koyale, Satyajeet S. Patil, Swapnil R. Patil, Jinho Bae, Nilesh R. Chodankar, Yash G. Kapdi, Saurabh S. Soni, Pramod S. Patil and Sagar D. Delekar\*

