

# MSDE

## Molecular Systems Design & Engineering rsc.li/molecular-engineering

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### IN THIS ISSUE

ISSN 2058-9689 CODEN MSDEBG 9(10) 971-1078 (2024)



**Cover**  
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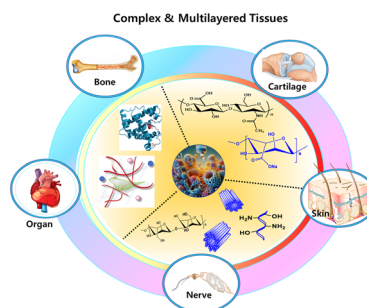
**Inside cover**  
See Insup Noh *et al.*, pp. 976-998.  
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### REVIEWS

977

#### Recent advances in 3D bioprinting of polysaccharide-based bioinks for fabrication of bioengineered tissues

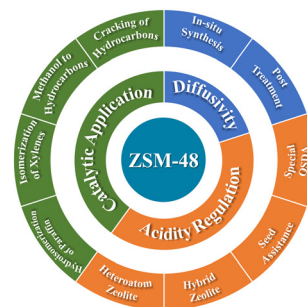
Kasula Nagaraja, Pratik Dhokare, Amitava Bhattacharyya and Insup Noh\*



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#### Synthesis and catalytic application of ZSM-48 zeolite

Wen Liu, Yanan Wang, Xinbao Zhang, Fucun Chen, Sujuan Xie, Longya Xu, Xiujie Li\* and Xiangxue Zhu\*





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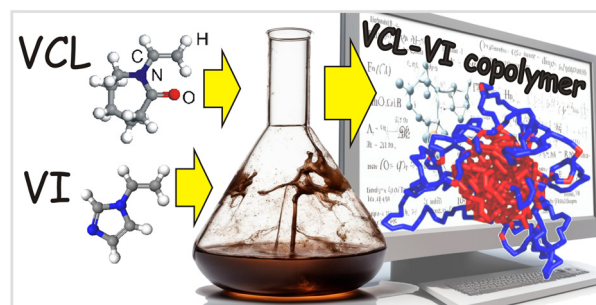


## COMMUNICATION

1017

### Synthesis and theoretical studies of the conformational behaviour of *N*-vinylcaprolactam/*N*-vinylimidazole copolymers in selective solvent

A. I. Barabanova, A. V. Vorozheykina, M. K. Glagolev,\*  
P. V. Komarov\* and A. R. Khokhlov

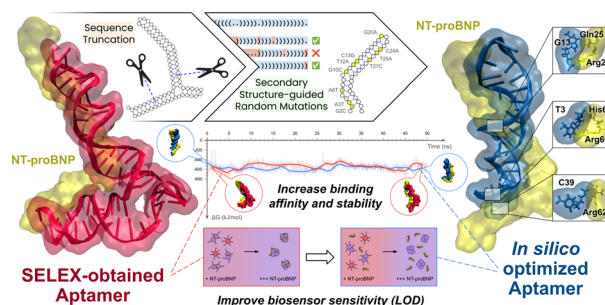


## PAPERS

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### Improving DNA aptamers against a heart failure protein biomarker using structure-guided random mutation approaches for colourimetric biosensor development

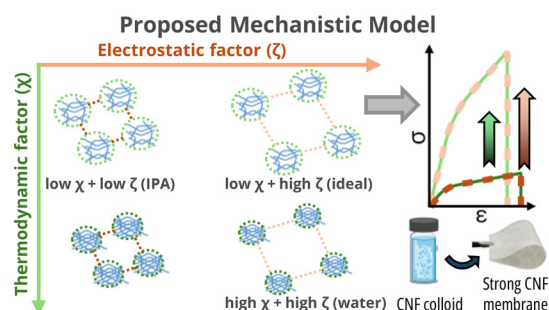
Donny Marcius, Bejo Ropii, Diah Ayu Safitri,  
Mokhamad Fakhru Ulum, Husna Nugrahapraja\*  
and Isa Anshori\*



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### Insights into controlling bacterial cellulose nanofiber film properties through balancing thermodynamic interactions and colloidal dynamics

Aban Mandal, Kuotian Liao, Hareesh Iyer, Junhao Lin,  
Xinqi Li, Shuai Zhang and Eleftheria Roumeli\*

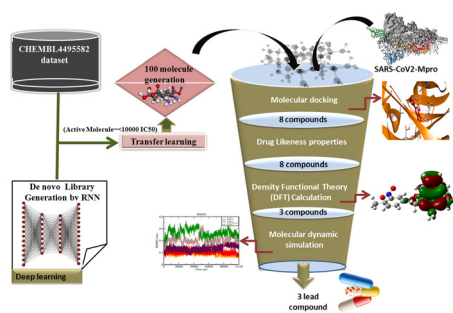


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### Unravelling the impact of sulfur atom oxidation and donor-acceptor effects on the performance of blue TADF emitters: a detailed computational study

Singaravel Nathiya\*





## Designing novel inhibitor derivatives targeting SARS-CoV-2 M<sup>PRO</sup> enzyme: a deep learning and structure biology approach

Tushar Joshi, Shalini Mathpal, Priyanka Sharma, Akshay Abraham, Rajadurai Vijay Solomon\* and Subhash Chandra\*

