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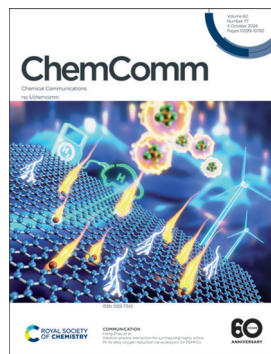
Chemical Communications

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IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 60(77) 10599-10782 (2024)



Cover

See Hong Zhao *et al.*, pp. 10672–10675. Image reproduced by permission of Hong Zhao from *Chem. Commun.*, 2024, 60, 10672.



Inside cover

See Chenxu Wang, Roman Boulatov *et al.*, pp. 10629–10641. Image created by Marina Bulan. Image reproduced by permission of Roman Boulatov from *Chem. Commun.*, 2024, 60, 10629.

PROFILE

10611

Contributors to the Pioneering Investigators collection 2024: Part 2

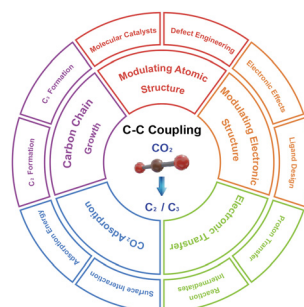


HIGHLIGHT

10618

Mechanistic insights into C–C coupling in electrocatalytic CO₂ reduction reaction

Yao Hu, Muhammad Asif, Jiaxuan Gong, Hassan Zeb, Haihui Lan,* Muhammad Kashif Khan, Huicong Xia* and Mingliang Du*



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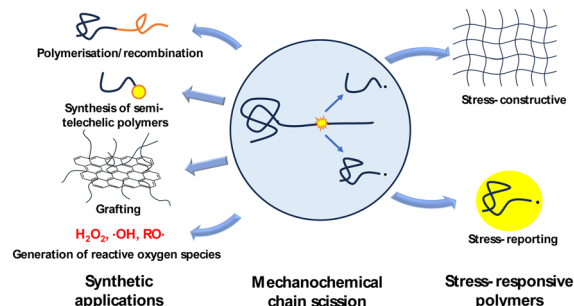
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FEATURE ARTICLES

10629

Productive chemistry induced by mechanochemically generated macroradicals

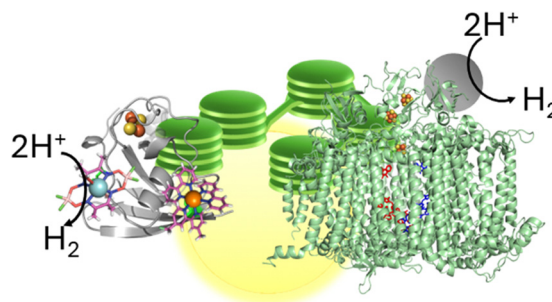
Chenxu Wang,* Cai-Li Sun and Roman Boulatov*



10642

Photosynthetic biohybrid systems for solar fuels catalysis

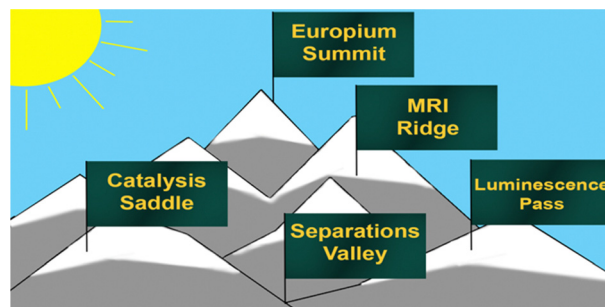
Lisa M. Utschig* and Karen L. Mulfort



10655

Europium(II/III) coordination chemistry toward applications

Elizabeth C. Lewandowski, Colin B. Arban, Morgan P. Deal, Andrea L. Batchev and Matthew J. Allen*

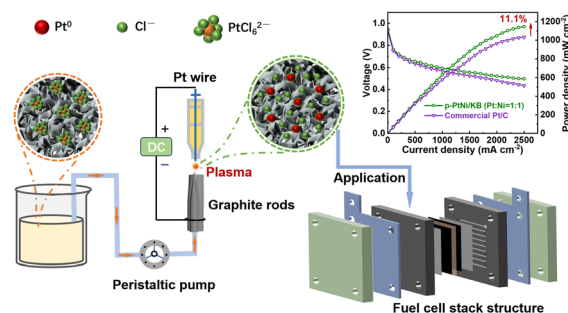


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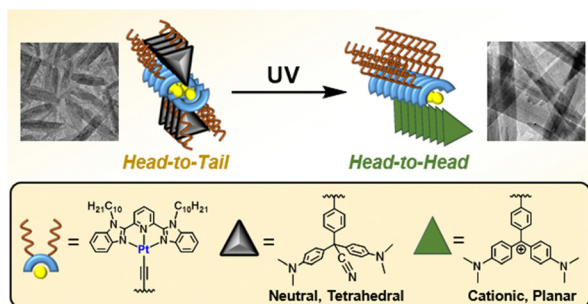
10672

Solution-plasma interaction for synthesizing highly active Pt–Ni alloy oxygen reduction nanocatalysts for PEMFCs

Shuxiu Yang, Yu Tang, Yawen Tan, Bona Fu, Mingyang Liu, Qingzhu Shu, Shuhong Liu and Hong Zhao*



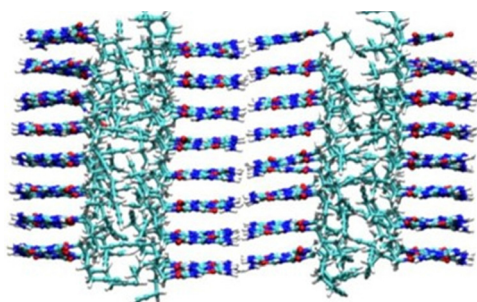
10676



Photoactivable malachite green-based alkynylplatinum(II) 2,6-bis(*N*-alkylbenzimidazol-2-yl)-pyridine complexes

Andy Shun-Hoi Cheung, Ming-Yi Leung,
Tony Ho-Ching Fung and Vivian Wing-Wah Yam*

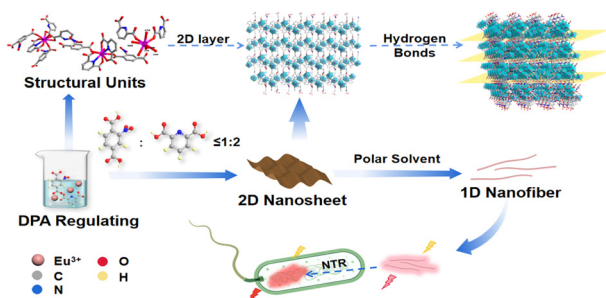
10680



Altering the structures of 3D supramolecular assemblies from melamine and cyanuric acid derivatives in water

Nikita Orekhov, Nina Bukhtiarova, Zlata A. Brushevich,
Anton A. Muravev, Elad Nadav, Yael Tsarfati,
Anna Kossoy, Isai Feldman, Anastasia Zelenina,
Anna A. Rubekina, Sergey N. Semenov* and
Ekaterina V. Skorb*

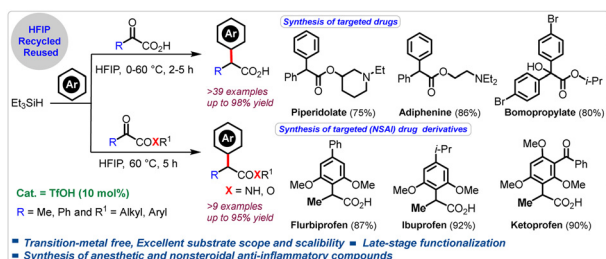
10684



Dimensional regulation of lanthanide metal-organic frameworks and their application in bacterial detection

Yifan Gao, Zhizhuo Gu, Xiaoling Sun, Jiaying Pang,
Liakuo Gong,* Lian Xia* and Fengli Qu

10688



Chemoselective deoxygenative α -arylation of carboxylic acids, amides, and esters: synthesis of anesthetic and anti-inflammatory compounds

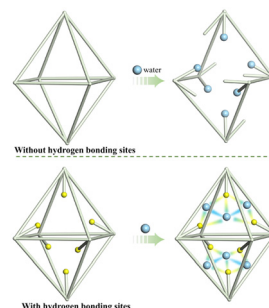
Jabir Khan, Aparna Tyagi, Rima Samanta and
Chinmoy Kumar Hazra*



10692

Enhanced water stability of MOFs *via* multiple hydrogen bonds and their application in water harvesting

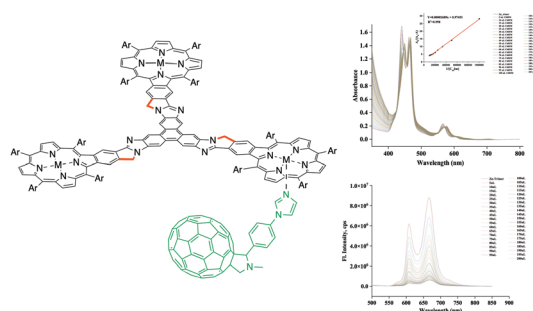
Yi-Chao Wang, Mo-Han Chen, Zi-Wen Fan, Yue Wang, Cai-Xiang Huang, Hui-Fang Wang,* Jian-Ping Lang* and Zheng Niu*



10696

Cyclically conjugated porphyrin trimers linked through benzo[4,5]imidazo[2,1-a]isoindole bridges

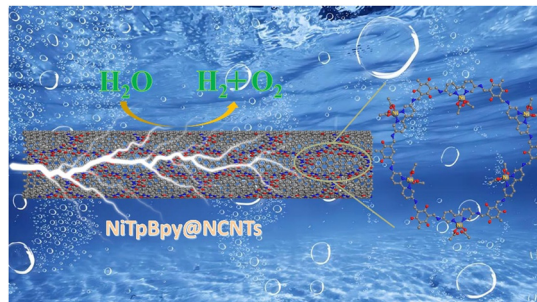
Ting Han, Prabha Sharma, Navneet Khetrpal and Hong Wang*



10700

Covalently grafting a covalent organic framework onto carbon nanotubes as a bifunctional electrocatalyst for overall water splitting

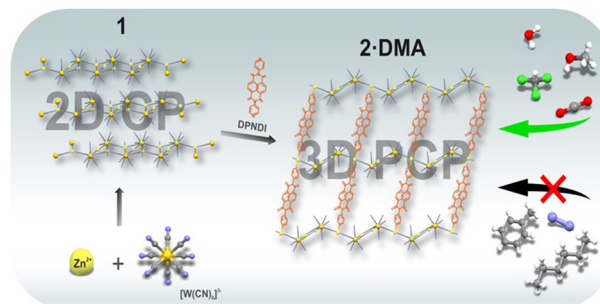
Hongwei Li, Qizhe He, Yunye Cao,* Lei Lei, Degao Wang* and Ting-Ting Li*



10704

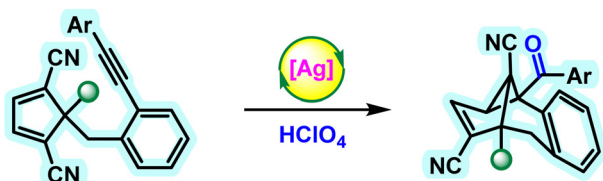
Exploring porosity in a flexible 3D organic–inorganic $\{Zn_{II}(4DPNDI)[W^V(CN)_8]_2\}$ coordination network

Katarzyna Jędrzejowska, Jędrzej Kobylarczyk, Tadeusz M. Muzioł, Beata Nowicka, Damian Jędrzejowski, Dariusz Matoga, Bartłomiej Gawęł and Robert Podgajny*



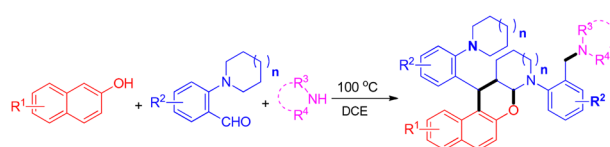
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10708


Ag(I)-catalyzed diastereoselective oxidative cyclopropanation of prochiral alkyne-tethered 1,3-dicarbonitriles

N. Navaneetha, Anandaro Munakala and Rambabu Chegondi*

10712

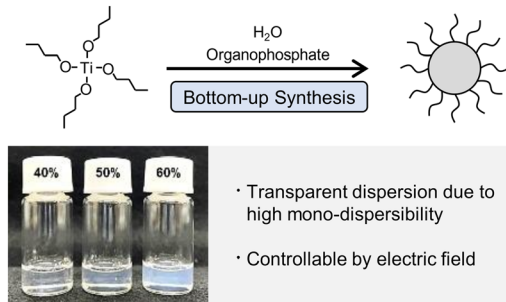


- Multi-component domino reaction
- High step and atom economy
- Molecular diversity
- Broad substrate scope
- Excellent regioselectivity
- Simple work-up procedure

Eco-friendly $\alpha,\beta\text{-C}(\text{sp}^3)\text{-H}$ difunctionalization of tertiary amines via sequential [1,5]-hydride transfer and hetero-Diels-Alder cyclization

Yi Zhang, Huihui Yan, Peng Zhao,* Rener Chen, Weiwei Fang,* Lei Wang and Yongmin Ma*

10716

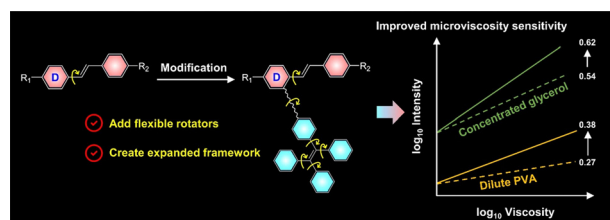


- Transparent dispersion due to high mono-dispersibility
- Controllable by electric field

Synthesis and electric field response of titanium dioxide nano-particles dispersed in hydrophobic solvents

Tetsuya Kurebayashi,* Seki Inoue, Yuichi Masuda, Hiroyuki Shinoda and Takehiko Sasaki*

10720


A flexible rotator-expanded molecular framework integrated strategy for improving microviscosity sensitivity of molecular rotor probes

Xiaofang Tang, Yaping Zhu, Weijiang Guan* and Chao Lu*

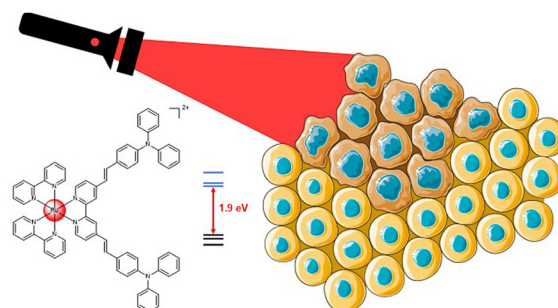


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10724

Rational design of a red-light absorbing ruthenium polypyridine complex as a photosensitizer for photodynamic therapy

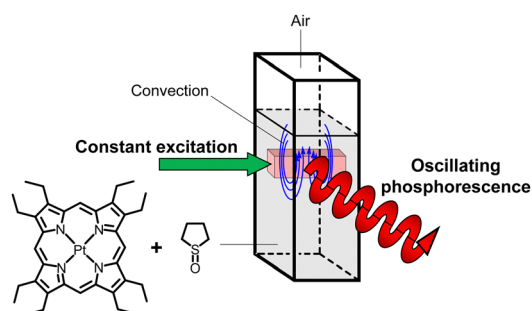
Alessia Fennes, Nicolás Montesdeoca, Zisis Papadopoulos and Johannes Karges*



10728

Sustainable phosphorescent oscillators based on photochemical deoxygenation in convections

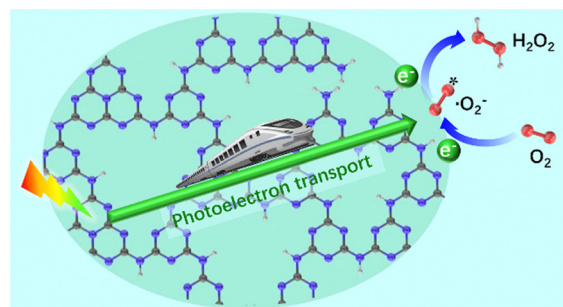
Hongqi Zhou, Sihan Chen, Jiang He and Wei Lu*



10732

Molten-salt-induced structural heterogeneity of carbon nitride for efficient photocatalytic H₂O₂ production

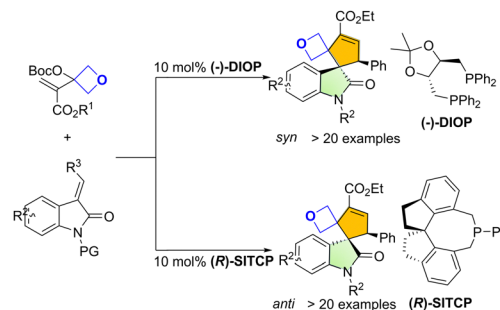
Yonghai Wang, Hui Zhang,* Deming Wei, Li Shangguan, Yu Guo and Jianhua Sun*



10736

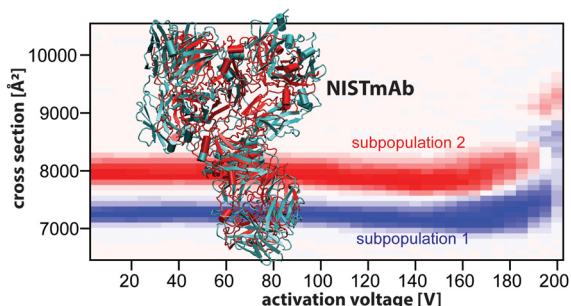
Phosphine-catalyzed enantioselective and diastereodivergent [3+2] cyclization for the construction of oxetane dispirooxindole skeletons

Xiao Han, Jie Hou, Haiyan Zhang, Zhen Wang* and Weijun Yao*



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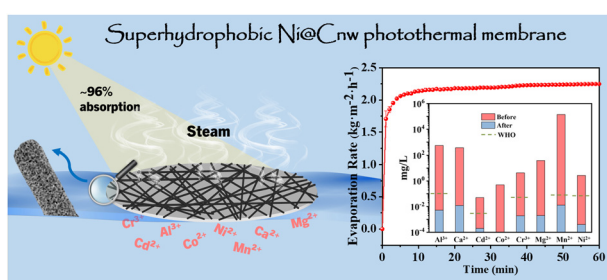
10740



Differential glycosylation does not modulate the conformational heterogeneity of a humanised IgGk NIST monoclonal antibody

Fanny C. Liu,* Jusung Lee, Thais Pedrete, Erin M. Panczyk, Stuart Pengelley and Christian Bleiholder*

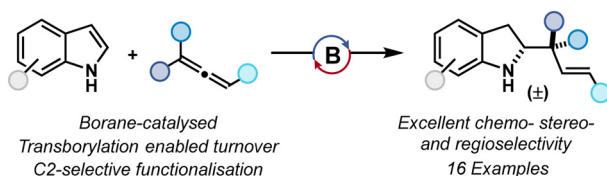
10744



A Ni@C nanowire-enabled photothermal membrane for highly efficient solar-driven interfacial water purification

Cailin Yang, Limingming Huang and Kai Han*

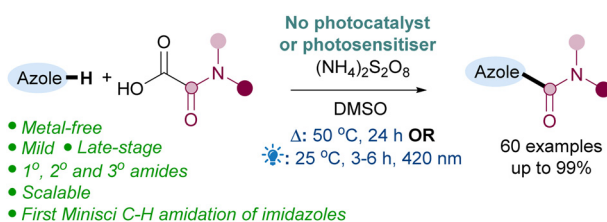
10748



Borane-catalysed C2-selective indole reductive functionalisation

Kieran Nicholson, Sarah L. McOnie, Thomas Langer, Gary S. Nichol and Stephen P. Thomas*

10752



Direct C–H amidation of 1,3-azoles: light-mediated, photosensitiser-free vs. thermal

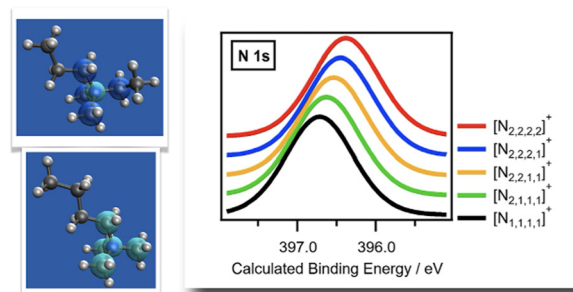
David T. Mooney, Heather McKee, Tabea S. Batch, Samuel Drane, Peter R. Moore and Ai-Lan Lee*



10756

Controlling and predicting alkyl-onium electronic structure

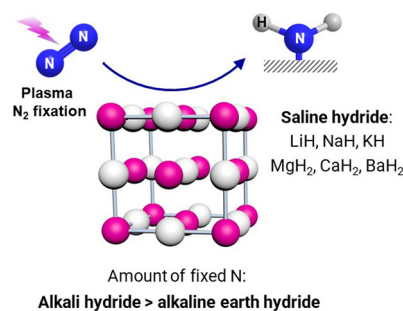
Frances K. Towers Tompkins, Lewis G. Parker, Richard M. Fogarty, Jake M. Seymour, Ekaterina Gousseva, David C. Grinter, Robert G. Palgrave, Christopher D. Smith, Roger A. Bennett, Richard P. Matthews* and Kevin R. J. Lovelock*



10760

Nitrogen fixation by alkali and alkaline earth metal hydrides assisted by plasma

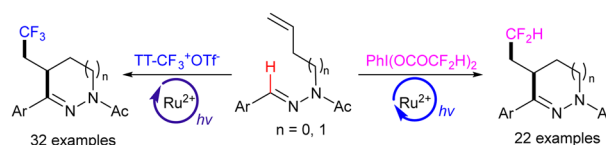
Han Wu, Kai Ma, Jiaqi Wen, Liang Yang, Yeqin Guan, Qianru Wang, Wenbo Gao, Jianping Guo* and Ping Chen



10764

Photocatalytic synthesis of polyfluoroalkylated dihydropyrazoles and tetrahydropyridazines

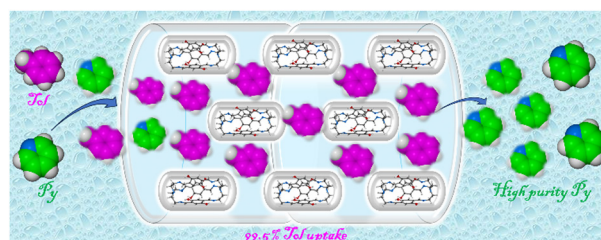
Lingli Liu, Chengli Xiang, Changduo Pan* and Jin-Tao Yu*



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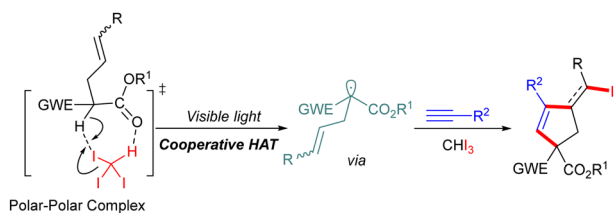
Polar organic cages for efficiently separating azeotropic mixtures

Lukman O. Alimi, Xin Liu, Gengwu Zhang, Basem Moosa and Niveen M. Khashab*



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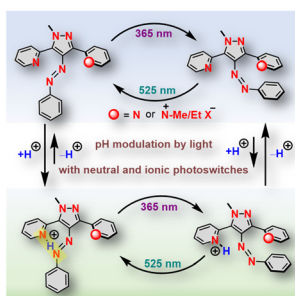
10772



Dispersion-induced cooperative hydrogen atom transfer for radical iodoalkylation

Shaoqun Zhu,* Lizi Jia, Qi Cheng, Ying Han, Qiu Sun, Huaguang Yu, Xiaoyun Chen and Hong Hou

10776



Neutral and ionic *N*-methyl phenylazo-3,5-(di-2-pyridyl)pyrazole photoswitches: probes for reversible pH modulation by light

Sapna Singh, Archana Velloth, Rajani, Manu Goyal, Navneet Kaur, Sanjay Singh* and Sugumar Venkataramani*

