

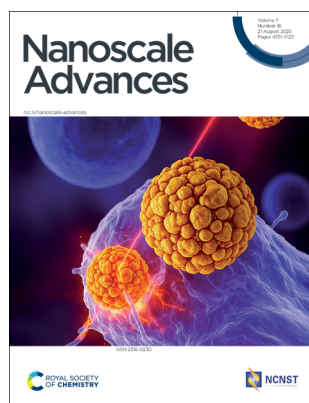
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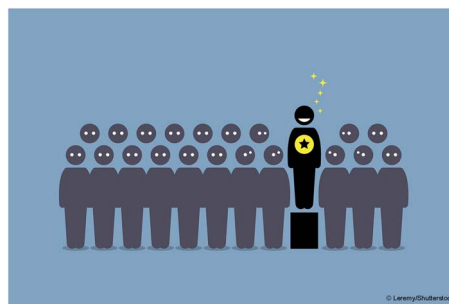


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EDITORIAL

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Outstanding Reviewers for *Nanoscale Advances* in 2024

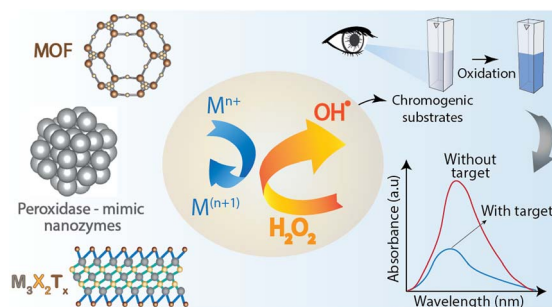


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Nano-enhanced Fenton/Fenton-like chemistry: integrating peroxidase nanozymes, MOFs, and MXenes for next-generation colorimetric biosensors

Hanh An Nguyen, Nguyen Tran Truc Phuong, Nguyen Bao Tran, Thi Ngoc Diep Trinh, Ngoc Xuan Dat Mai, Ngoc Quang Tran, Nhu Hoa Thi Tran* and Kieu The Loan Trinh*



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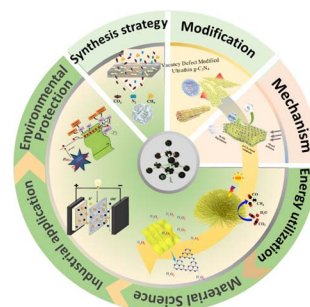
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REVIEWS

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Recent advances in graphitic carbon nitride-based composites for enhanced photocatalytic degradation of rhodamine B: mechanism, properties and environmental applications

Meie Zheng, Mengru Guo, Fei Ma,* Wenwen Li and Yujia Shao



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AI-integrated wearable strain sensors: advances in e-skin, robotics, and personalized health monitoring

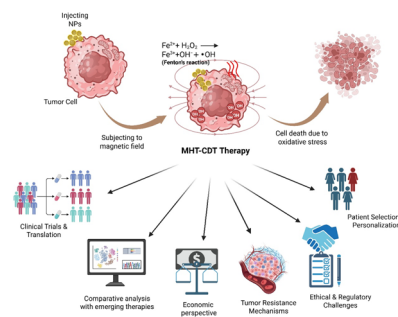
Neha Yadav, Qianqian Zhang, Dongfeng Qi, Ashish Yadav* and Hongyu Zheng*



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The evolution of integrated magnetic hyperthermia and chemodynamic therapy for combating cancer: a comprehensive viewpoint

Anjali Chauhan, Anamika Saini and Deepika Sharma*

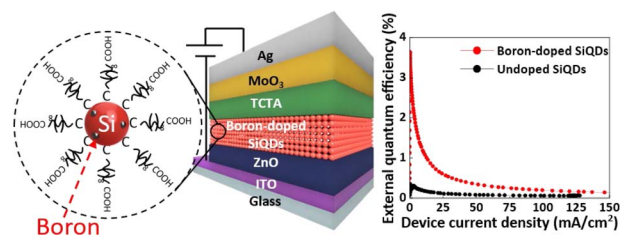


COMMUNICATIONS

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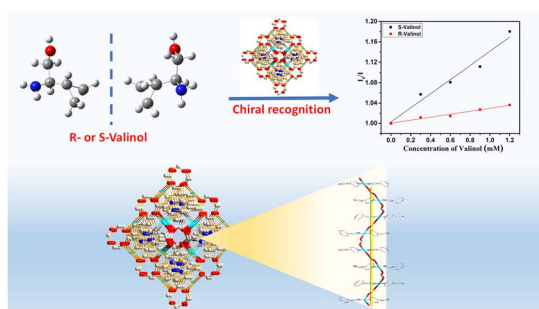
Rational impurity doping for enhanced hole mobility in silicon quantum dots for light-emitting diodes

Hiroyuki Yamada,* Tadaaki Nagao and Naoto Shirahata*



COMMUNICATIONS

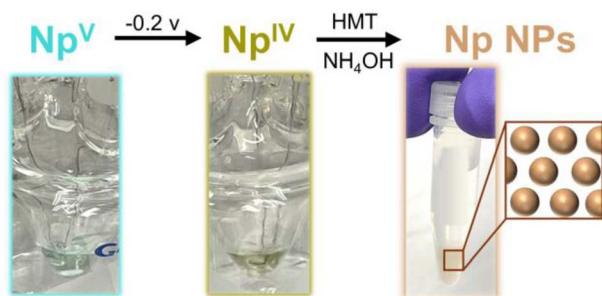
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A metal–organic framework with chiral nanochannels for enantioselective fluorescence switching of amino alcohols

Ritu Ladhi, Arshminster Kaur Dhillon and Monika Singh*

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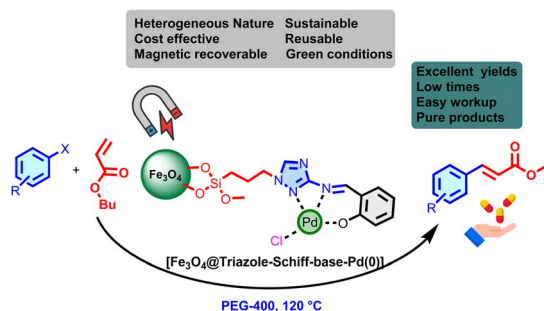


Synthetic engineering of neptunium oxide nanoparticles

Ashley M. Hastings,* Nic Cicchetti, Joseph R. Boro, Tashi Parsons-Davis and Jennifer A. Shusterman

PAPERS

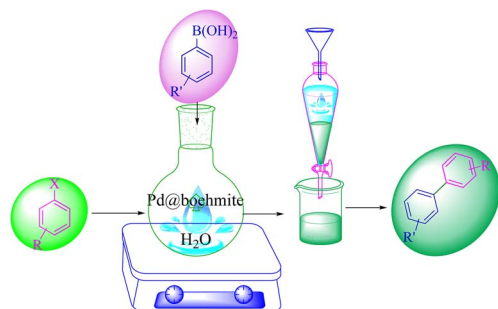
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A nanomagnetic triazole-based Schiff-base complex of palladium(0) as an efficient heterogeneous catalyst for the Mizoroki–Heck C–C cross-coupling reaction under green conditions

Yassin T. H. Mehdar,* Fatimah Mohammed Alshamsan, Asma Ahmad Nashawi, Hussein Eledum, Ahmed Mohajja Alshammari and Jawza A. Almutairi

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A new palladium complex Schiff-base on functionalized nanoboehmite as a reusable and practical catalyst for selective Suzuki C–C bond formation

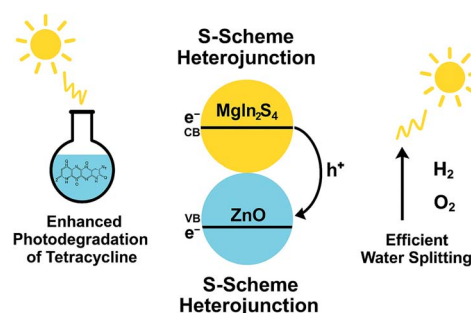
Samaneh Heydarian,* Bahman Tahmasbi and Mitra Darabi



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Interfacial S-scheme charge transfer in $\text{MgIn}_2\text{S}_4/\text{ZnO}$ heterojunction for enhanced photodegradation of tetracycline and efficient water splitting

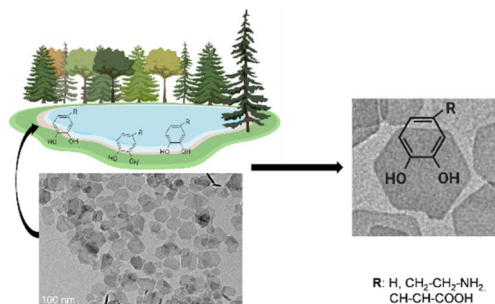
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Effect of the catechol structure on the functionalization and magnetic properties of barium hexaferrite nanoplatelets

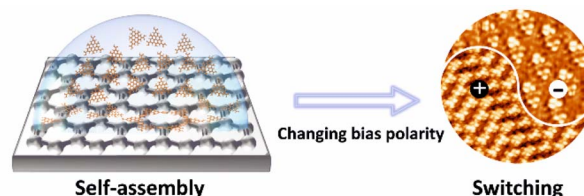
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Switching of supramolecular nanostructures at the solid–liquid interface: interplay of bias polarity and solution concentration

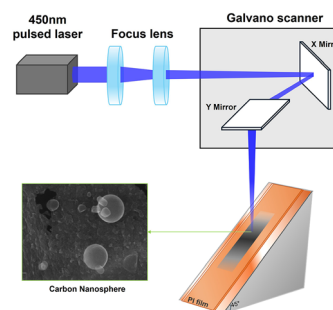
Baoxin Jia, Mihaela Enache, Bettina D. Gliemann, Angelina Jovic, Milan Kivala* and Meike Stöhr*



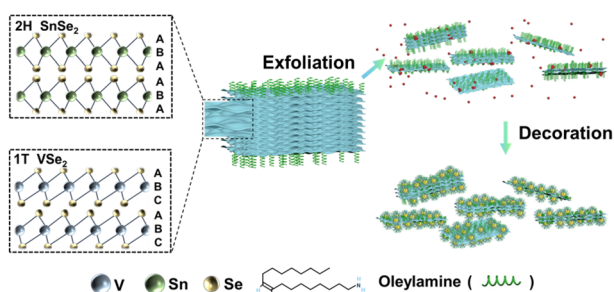
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Experimental and molecular dynamics study of laser-induced carbon nanosphere formation using nanosecond-pulsed lasers

Cheol Hwan Kim, Chae Yoon Shin, Jun Uk Lee, Sung-Yeob Jeong* and Bo Sung Shin*



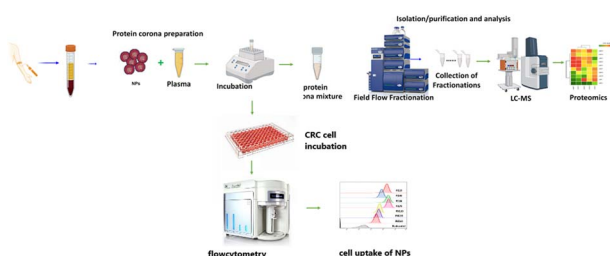
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Synthesis, redox exfoliation, and magnetic nanoparticle decoration of VSe₂ and SnSe₂ nanosheets

Zhengxi Xuan, Zheng Fu, B. Medini Rajapakse, Ali Jawaaid, Shuo Liu, Richard A. Vaia,^{*} Luis Velarde,^{*} Paras N. Prasad^{*} and Mark T. Swihart^{*}

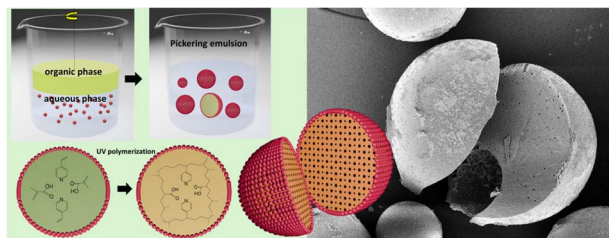
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Protein corona composition modulates uptake of polymeric micelles by colorectal cancer cells

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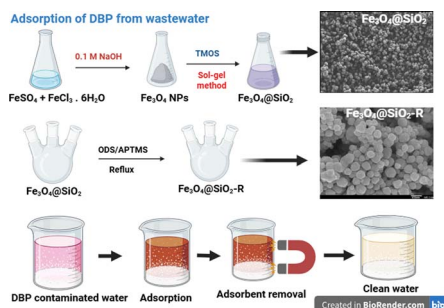
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Optimizing surface properties and particle morphology for metal ion adsorption: precise tuning via Pickering emulsion polymerization

Andrei Honciuc,^{*} Oana-Iuliana Negru and Mirela Honciuc

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Highly efficient removal of dibutyl phthalate from wastewater using a novel hydrophilic–lipophilic oxide magnetic adsorbent based on silica-coated iron oxide nanoparticles

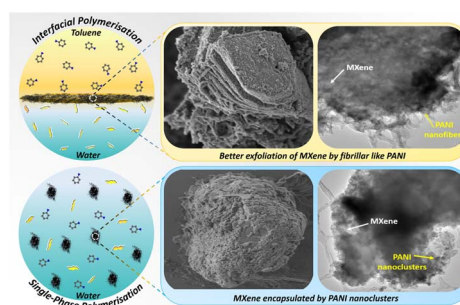
Sarah Alharthi, Tahira Bibi, Eman Y. Santali and Ashraf Ali^{*}



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Liquid/liquid interface assisted *in situ* polymerisation of aniline on $\text{Ti}_3\text{C}_2\text{T}_x$ MXene for electrochemical detection of dopamine

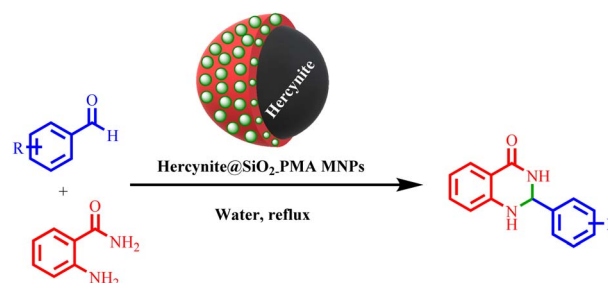
Anjali Sugunan, Aiswarya Anil Syamala, Athul Beena Radhakrishnan and Mini Mol Menamparambath*



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Synthesis of a hercynite supported phosphomolybdic acid magnetic nanocomposite as an efficient catalyst for the synthesis of N-heterocycles

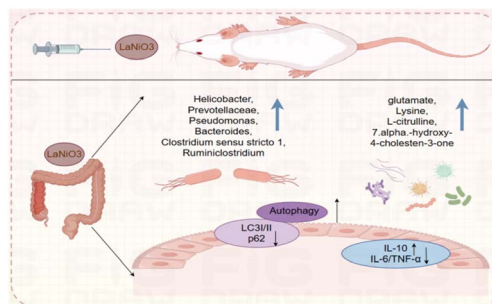
Kowsar Azizi, Saba Ghasemi* and Ahmad Nikseresht*



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Oral exposure to LaNiO_3 regulates the immune system, modulates gut flora, and induces intestinal autophagy in mice

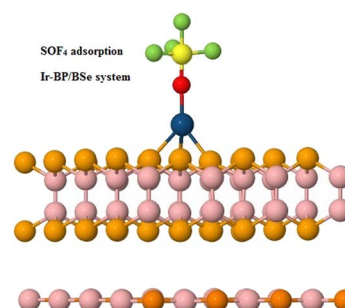
Xiaoying Lin,* Yanfei Zhang, Qingxuan Liu, Di Wu, Lili Zuo, Yuanbao Zhang, Nianqiu Shi* and Rui Chen*



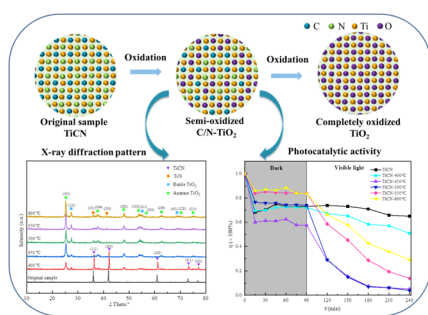
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Iridium (Ir) and osmium (Os) modified BP/BSe heterostructures as promising nanoscale molecule sensors for detection of H_2S , SO_2F_2 and SOF_4 gases: a DFT outlook

Amirali Abbasi*



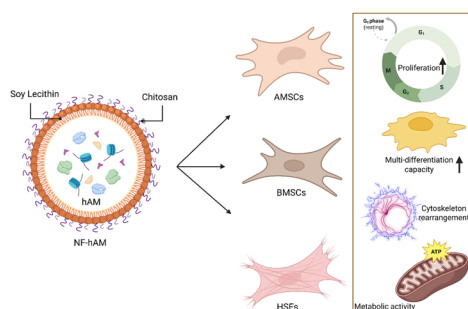
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Oxidation behavior of TiC and TiCN and their potential photocatalytic activity in a semi-oxidized state

Shiyun Tang, Guoqiang Song,* Junjiang Guo, Claudia Li, Kang Hui Lim, Pinli Diao, Wenting Chen, Feiyang Hu, Jaka Sunarso, Hao Tang* and Sibudjing Kawi*

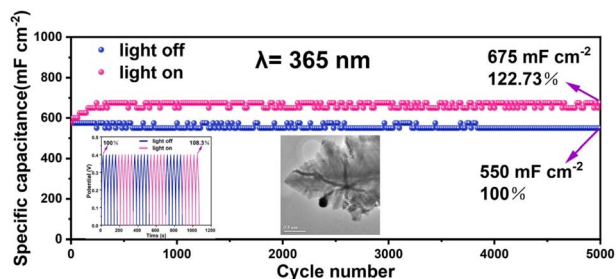
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Amniotic membrane-encapsulated chitosan–lecithin nanoparticles promote the regenerative potential of mesenchymal stromal cells and fibroblasts

Ahmed M. Abou-Shanab, Mostafa Fytor, Shaimaa Shouman, Dina Atta, Asmaa Khairy, Radwa Ayman Salah, Omaima Idris and Nagwa El-Badri*

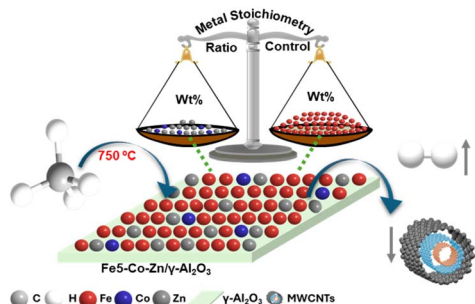
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Designed formation of Cu₂S hierarchical nanostructures as self-supported photoelectrodes for photo-supercapacitors

Ruitong Xu, Muhammad Arif, Guopeng Pan, Lin Xu* and Ting Zhu*

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Boosting turquoise hydrogen and carbon nanotube production via catalytic methane decomposition: influence of active metal ratios in Fe₅–Co–Zn/γ-Al₂O₃ nanocatalysts

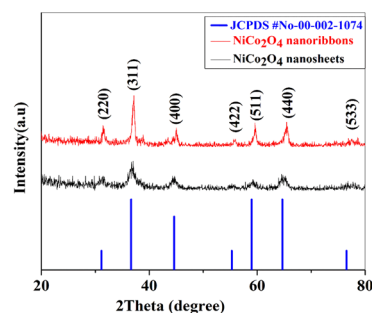
Aakash Rajpoot, Afaq Ahmad Khan and Ejaz Ahmad*



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Enhanced electrocatalytic performance of NiCo₂O₄ nanosheets and nanoribbons for methanol oxidation in alkaline media: morphology-dependent insights

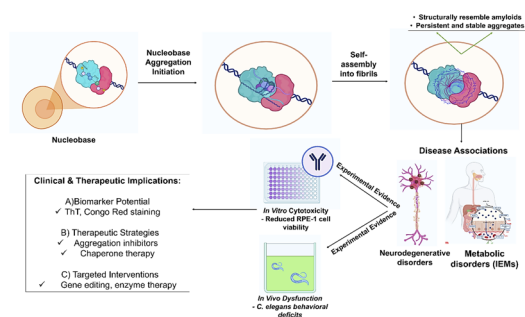
Hagar Ali, Waleed M. A. El Rouby, M. H. Khedr and Mai F. M. Hmamm*



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Nucleobase self-assembly: aggregation, morphological characterization, and toxicity analysis

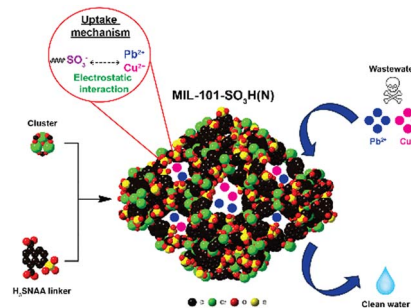
Raj Dave, Ankita Jaiswal, Ankur Singh, Anam Naseer, Monisha Patel, Aamir Nazir,* Dhiraj Bhatia,* Nidhi Gour* and Sandeep Verma*



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A new MIL-101-type chromium-based metal-organic framework with densely packed sulfonic groups: an ultra-high uptake of toxic Pb²⁺ and Cu²⁺ ions from an aqueous medium

My V. Nguyen,* Huy K. Duong, Hung N. Nguyen, Loc C. Luu and Thai M. Nguyen



5120

Correction: A nanomagnetic triazole-based Schiff-base complex of palladium(0) as an efficient heterogeneous catalyst for the Mizoroki–Heck C–C cross-coupling reaction under green conditions

Yassin T. H. Mehdar,* Fatimah Mohammed Alshamsan, Asma Ahmad Nashawi, Hussein Eledum, Ahmed Mohajja Alshammari and Jawza A. Almutairi

