

Journal of Materials Chemistry C

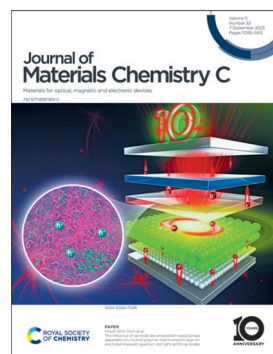
Materials for optical, magnetic and electronic devices

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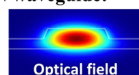
PERSPECTIVE

11107

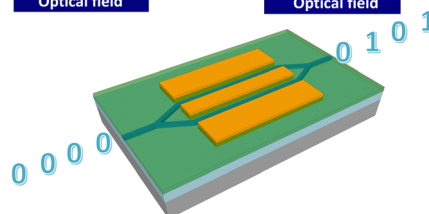
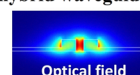
Perspectives of thin-film lithium niobate and electro-optic polymers for high-performance electro-optic modulation

Mengke Wang, Yixin Chen, Shengpeng Zhang,
Lianghai Dong, Hao Yao, Huajun Xu,*
Kaixin Chen* and Jieyun Wu*

TFLN waveguide:



Si-EOP hybrid waveguide:

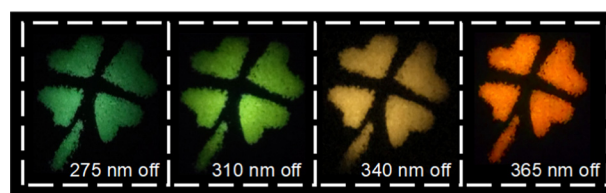


COMMUNICATION

11123

Single-component compounds with wide-range color-tunable ultralong organic phosphorescence

Weitao Sun, Xianyin Dai, Haiyan Ge, Xianfeng Meng,
Guiyun Duan* and Yanqing Ge*



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Journal of Materials Chemistry C covers materials with applications in optical, magnetic and electronic devices.

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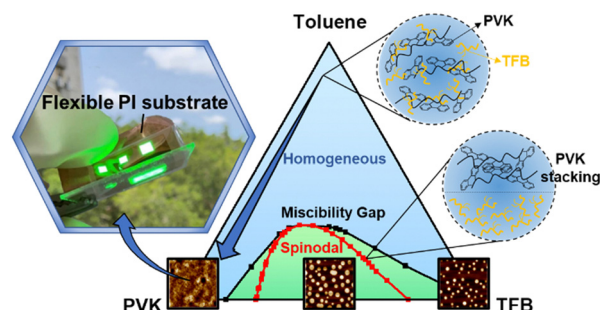


PAPERS

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The influence of spinodal decomposition-based phase separation in a hybrid polymer hole transport layer on electroluminescent quantum dot light-emitting diodes

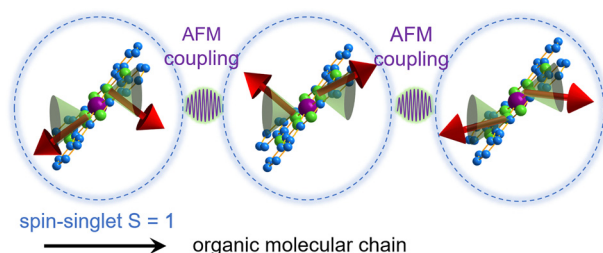
Minh-Son Hoang, Jie-Syuan Lu, Her-Yih Shieh and Hsueh-Shih Chen*



11137

Antiferromagnetic spin-1 large-*D* phase in organic spin-chain crystals

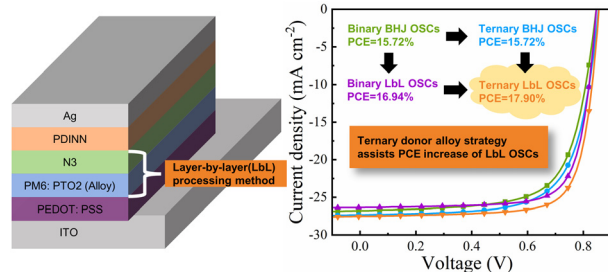
Zhihao Li, Yihao Wang, Yuyan Han, Meng Song, Jiangpeng Song, Junbo Li, Yongliang Qin, Langsheng Ling, Wei Tong, Yuxian Guo, Zan Du, Lei Zhang, Wenhua Zhang,* Yimin Xiong* and Liang Cao*



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Layer-by-layer processing enabled alloy-like ternary organic solar cells to achieve 17.9% efficiency

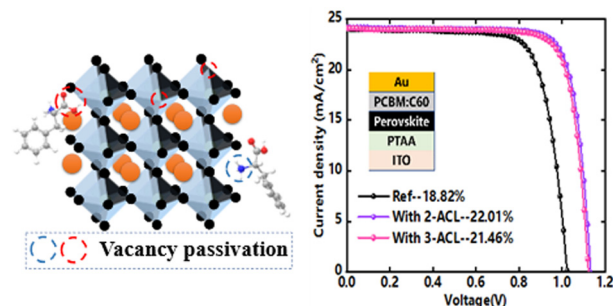
Jingwen Du, Ruobi Zhu, Luye Cao, Xinrui Li, Xiaoyang Du,* Hui Lin, Caijun Zheng and Silu Tao*



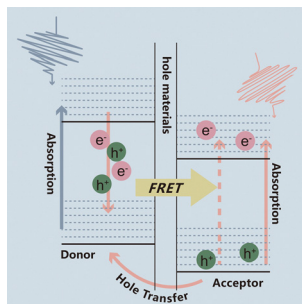
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Boosting the performance of MA-free inverted perovskite solar cells via multifunctional amino acid additives

Chenhui Zhang, Chunjun Liang,* Hongkang Gong, Jing Wang, Qi Song, Chao Ji, Fulin Sun, Ting Zhu, Xinghai Huang, Yuzhu Guo, Dan Li,* Fangtian You and Zhiqun He*



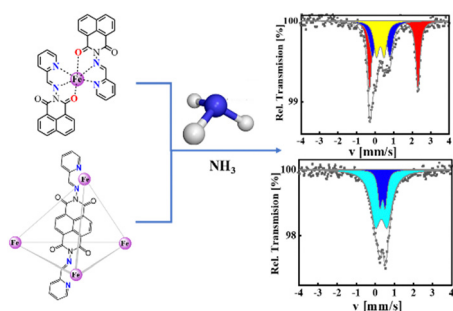
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Probing fluorescence resonance energy transfer and hole transfer in organic solar cells using a tandem structure

Zhenmin Zhao, Shenglong Chu, Jie Lv, Qianqian Chen, Zhengguo Xiao, Shirong Lu and Zhipeng Kan*

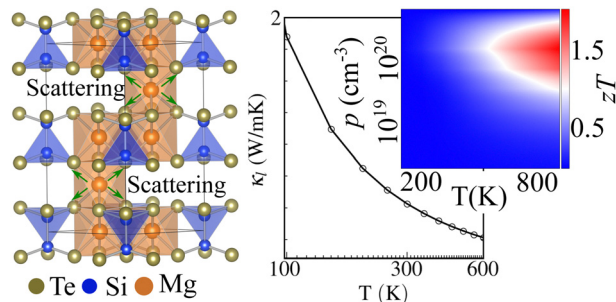
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From a mononuclear Fe^{II}L₂ complex to a spin crossover Fe^{II}₄L₆ cage by symmetric ligand architecture modification: insights into the ammonia gas sensing mechanism

Weiyang Li, Aurelian Rotaru, Mariusz Wolff, Serhiy Demeshko, Franc Meyer and Yann Garcia*

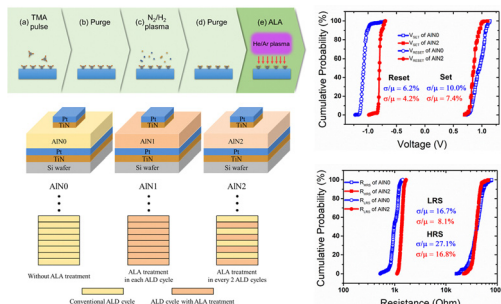
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High thermoelectric figure of merit in p-type Mg₃Si₂Te₆: role of multi-valley bands and high anharmonicity

Tribhuwan Pandey,* François M. Peeters and Milorad V. Milošević

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Atomic layer engineering on resistive switching in sub-4 nm AlN resistive random access memory devices

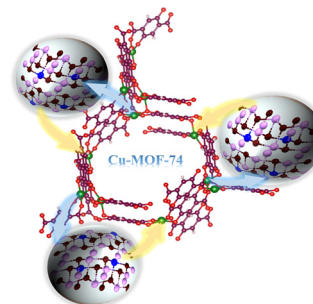
Chen-Hsiang Ling, Chi-Lin Mo, Chun-Ho Chuang, Jing-Jong Shyue and Miin-Jang Chen*



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Magnetic and optoelectronic modulation of Cu-MOF-74 films by quantum dots

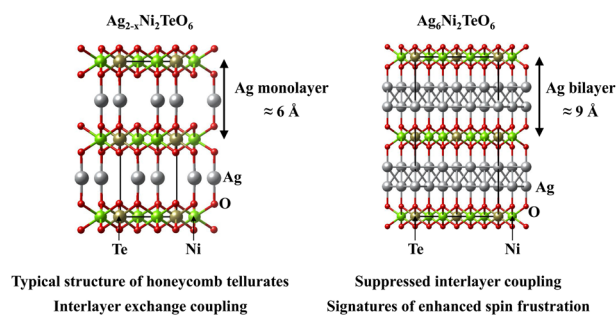
Zhimin Mao, Su-Yun Zhang, Duo Zhao, Xiaoliang Weng, Chenxu Kang, Hui Fang* and Yu-Jia Zeng*



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Antiferromagnetic ordering and signatures of enhanced spin-frustration in honeycomb-layered tellurates with Ag bilayers

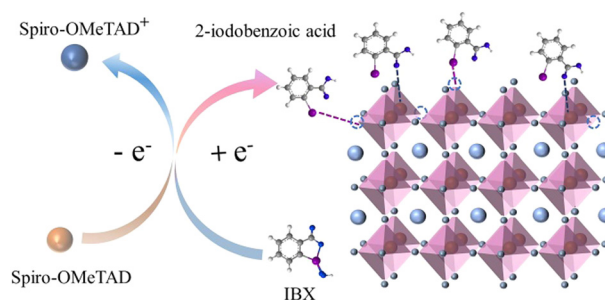
Sachio Komori,* Kohei Tada,* Noboru Taguchi, Tomoyasu Taniyama and Titus Masese*



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Introducing an alternative oxidant for Spiro-OMeTAD with the reduction product to passivate perovskite defects

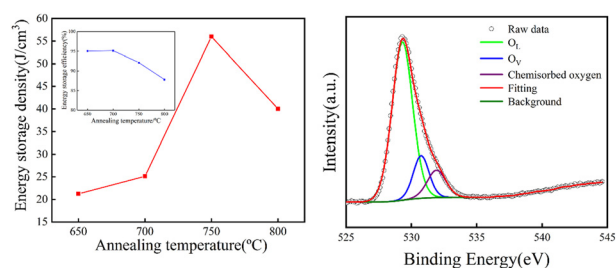
Xing Gao, Fei Wu,* Ye Zeng, Kaixing Chen, Xiaorui Liu* and Linna Zhu*



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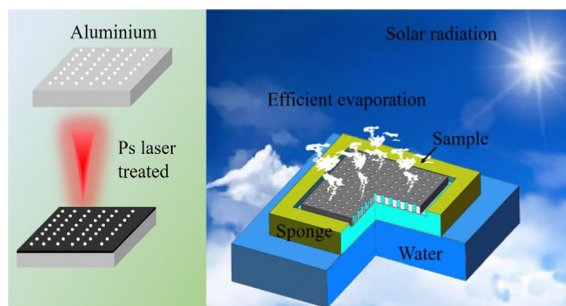
Effect of annealing temperature on energy storage performance of Ba(Zr_{0.35}Ti_{0.65})O₃ thin films under pure oxygen

Yanji Sun, Zheng Sun,* Xiang Li, Xipeng Yue, Yemei Han, Yangyang Xie, Kai Hu, Fang Wang and Kailiang Zhang



PAPERS

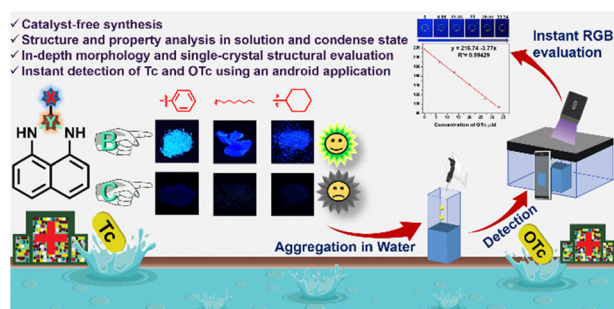
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A salt pollution self-cleaning Al based solar desalination evaporator fabricated using a picosecond laser

Weizhen Li, Dongkai Chu,* Qingwei Wang, Kai Yin,* Honghao Zhang, Shuoshuo Qu and Peng Yao*

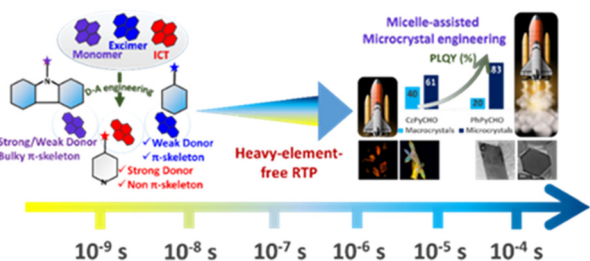
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Deciphering the proficiency of aliphatic/aromatic functionality on a heteroatom embedded planar polycyclic core: towards advanced onsite detection of tetracycline and oxytetracycline

Retwik Parui, Nehal Zehra and Parameswar Krishnan Iyer*

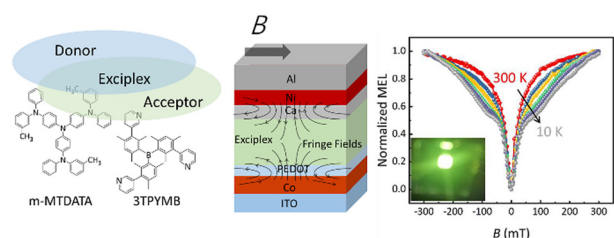
11252



Heavy-element-free triplet accessibility in pyrene-core compounds at room temperature by microcrystal engineering

Pradip Pattanayak, Arnab Nandi, Sourav Kanti Seth and Pradipta Purkayastha*

11262



Manipulation of magneto-electroluminescence from exciplex-based spintronic organic light-emitting diodes

Chenghao Liu, Zhen Chen, Huitian Du, Yuan Yu, Junfeng Ren, Jihui Fan, Shenghao Han* and Zhiyong Pang*



Asymmetrical organic D- π -A conjugate with 'V'-shaped crystal packing: quest to transcend the limits of photophysical properties and applications

Single molecule with various features and utilities

Three sites twisted structure

Y-shaped packing

IAPV

Acid Base
4 days
 $\Phi = 26.6\%$

Ground Solvent
 $\Phi = 53.3\%$

PIEE

Dual State Emission

Aggregate Emission

Whitish emission

Viscous medium

Wash free Bioimaging of Cancer cell

QR-code reader: Anti counterfeiting

Forensic utility

Data encryption

Hospital disposal detection

Food additive detection

Nitrogen defects and porous self-supporting structure carbon nitride for visible light hydrogen evolution

Insights into the electron transport performance of the FAPbI₃/SnO₂ interface

PbI₂/SnO

0.249 eV

Photoenhanced interfacial electron transfer of a dual functional hematite biophotoelectrode

Pt counter electrode

O_2/H_2O

Electron

Hematite

CB

FL

VB

Hole

Organic matters

CO_2

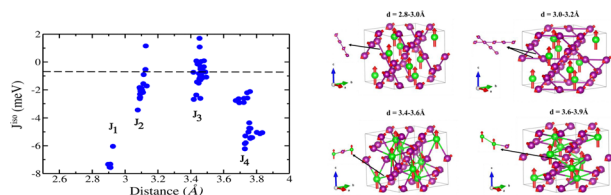
Cytochrome

Electron shuttle

- Efficient diffusion coefficients
- Enhanced photocurrent density
- Enhanced COD removal

FL = Fermi Level
CB = Conduction Band
VB = Valence Band

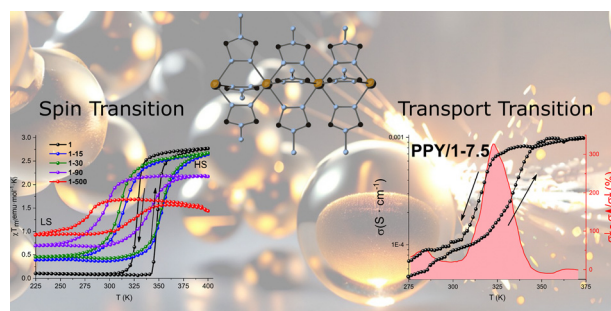
11312



Switching of dominant magnetic exchange interactions between tetrahedral–octahedral and octahedral–octahedral sites in $(\text{Mn}_{1-x}\text{Cr}_x)_3\text{O}_4$ spinels

G. D. Dwivedi, Tsung-Wen Yen, S. M. Kumawat, C. W. Wang, D. Chandrasekhar Kakarla, A. Tiwari, H. D. Yang, S. M. Huang, C. M. Chung, S. J. Sun and H. Chou*

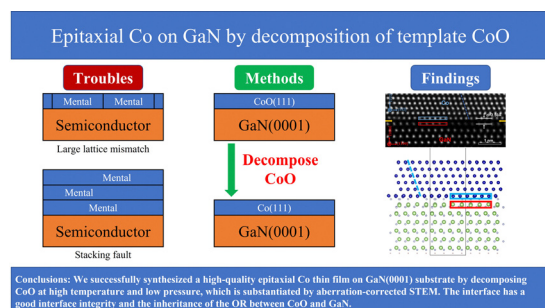
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Magnetic and electrical bistability in hybrid composites of conducting organic polymers with $[\text{Fe}(\text{NH}_2\text{-trz})_3]_n[\text{SO}_4]_n$

David Nieto-Castro,* Anna Weronika Graf, Francesc Gispert-Guirado and José Ramón Galán-Mascarós*

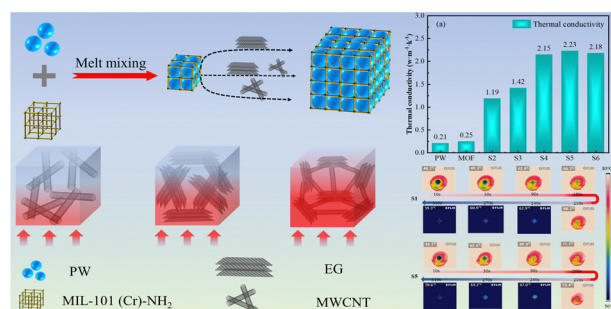
11333



Epitaxial Co on GaN by decomposition of template CoO

Nianqi Qiu, Wandong Xing,* Rong Yu and Fanyan Meng*

11341



Multifunctional MIL-101(Cr)-NH₂/expanded graphite/multi-walled carbon nanotube/paraffin wax composite phase change materials with excellent thermal conductivity and highly efficient thermal management for electronic devices

Ruiqiang He, Min Fang,* Jianduo Zhou, Hua Fei and Kai Yang

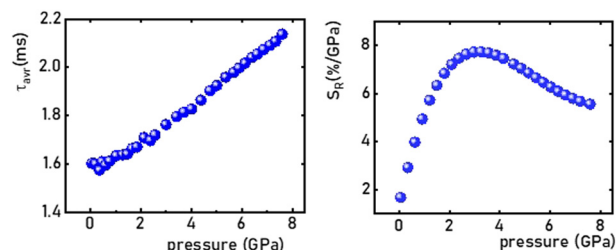


PAPERS

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Temperature invariant lifetime based luminescent manometer on Mn⁴⁺ ions

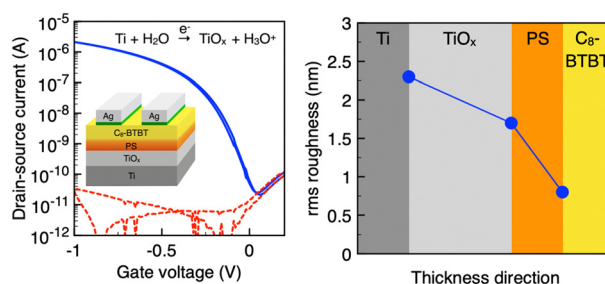
M. Pieprz, M. Runowski, P. Woźny, J. Xue and L. Marciniak*



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High-performance ultra-low-voltage organic field-effect transistors based on anodized TiO_x dielectric and solution-sheared organic single crystals

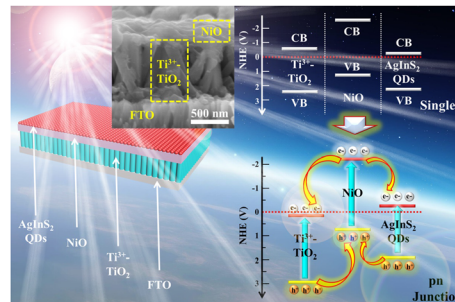
Bowen Geng, Feng Zhang, Xiaohai Ding, Lei Liu, Yan Chen, Shuming Duan,* Xiaochen Ren* and Wenping Hu*



11369

The transparent photovoltaic NiO/TiO₂ orderly nanoarray pn junction via synergism of AgInS₂ quantum dots and Ti³⁺ self-doping

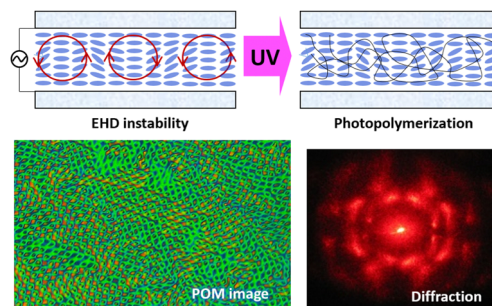
Lei Lu, Lixin Que, Yunlong Xu, Jun Cao, Jingjing Wang, Yingying Zheng, Lei Shi, Wenwu Zhong,* Chaorong Li* and Jiaqi Pan*

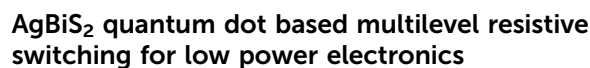


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Photo- and electro-controllable 2D diffraction gratings prepared using electrohydrodynamic instability in a nematic polymerizable mixture

Alexey Bobrovsky,* Valery Shibaev, Boris Ostrovskii, Martin Cigl, Věra Hamplová and Alexej Bubnov





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CORRECTION

11409

Correction: Gd–Er interaction promotes NaGdF₄·Yb, Er as a new candidate for high-power density applications

Daniel Avram,* Andrei A. Patrascu, Marian Cosmin Istrate and Carmen Tiseanu*