



**2013 International Symposium on
"Physics and Mechanics of New Materials and Underwater Applications" (PHENMA 2013)**
Kaohsiung, Taiwan, June 5-8, 2013

2013 International Symposium on "Physics and Mechanics of New Materials and Underwater Applications" (PHENMA 2013)

June 5-8, 2013

Kaohsiung, Taiwan

Program of PHENMA 2013

**2013 International Symposium on
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PROGRAM

June 5 (Wed.)			Chair
8:00-14:00	Reception		Prof. S.-H. Chang
14:00-15:00	Symposium work group meeting		Prof. S.-H. Chang
15:00-17:00	Early Registration		Prof. J.-K. Wu
18:30-20:30	Workshop Meeting		Prof. S.-H. Chang
June 6 (Th.)			
8:00-10:00	Registration		Prof. J.-K. Wu
10:00-10:40	Opening Ceremony		Prof. S.-H. Chang
10:40-11:10	Keynote Speech: Prof. T. C. Yang		Dean H.-C. Huang
11:10-11:40	Keynote Speech: Prof. V. Yu. Topolov		Prof. Ivan A. Parinov
11:40-12:10	Keynote Speech: President Yan-Kuin Su		Prof. C.-T. Lin
12:10-13:45	Lunch Buffet		
14:00-15:15	Underwater Tech. Session (A1)	New Material—Fiber Composites Session (B1)	(A1) Prof. T.C Yang, Dr. Maria S. Shevtsova (B1) Director Mike Liaw, Prof. Papot Jaroenapibal
15:15-15:40	Coffee Break	Coffee Break	
15:40-17:00	Application Session (A2)	Characterization and Research Methods Session (B2)	(A2) Prof. Ivan A. Parinov, Prof. J.-H. Lu (B2) Prof. M.-K. Lee , Prof. C.-C. Yang
17:00-18:30	Transportation to Restaurant		
18:30-20:30	Symposium Banquet, Ambassador Hotel, Kaohsiung		President D.-H. Hsiao

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June 7 (Fri.)			Chair
9:30-10:45	Materials Session (C1)	Materials Session (D1)	(C1) Prof. C.-D. Yang, Prof. Igor P. Raevski (D1) Prof. Vitaly Yu. Topolov, Prof. M.-C. Shih
10:45-11:00	Coffee Break	Coffee Break	
11:00-12:00	Poster Session I		Prof. Arkady N. Soloviev, Prof. M.-Y. Yeh, Prof. Y.-Y. Bu
12:00-13:30	Lunch		
13:00-14:00	Poster Session II		Prof. Jenny C.-Y. Lee, Prof. Y.-M. Liu Prof. S.-F. Chao
14:00-15:00	Materials Session (C2)	Synthesis & Processing Session (D2)	(C2) Prof. T.-Y. Sung, Dr. Andrey S. Vasiliev (D2) Prof. H.-Y. Wang, Prof. Napat Tiroj
15:00-15:30	Symposium Conclusion Discussion		Prof. Ivan A. Parinov, Dean Somnuk Theerakulpisut Prof. S.-H Chang
15:30-17:00	Technical Program I, Visiting Industrial Partner (Formosa Plastics Co.)		Prof. J.-K. Wu, Prof. J.-P. Wang
June 8 (Sat.)			
9:00-12:00	Technical Program II, Kaohsiung Harbor and Polaris		Prof. C.-L. Huang, Prof. W.-L. Hong

SESSIONS

Keynote	Prof. T. C. Yang, Prof. V. Yu. Topolov, and President Y.-K. Su
Posters Session	
Oral Presentations	i. Materials: Ferro-Piezoelectrics, Semiconductors, Energy Related Materials, Environmental Materials, Medical Materials, Thin Films, Ceramics, Composite, and Nano-Materials, etc.
	ii. Synthesis & Processing: Powder Processing, Processing Technologies, Piezoelectric Technologies, and MEMS-Processing, etc.
	iii. Characterization and Research Methods: Microstructure Properties, Physical Properties, Mechanical Properties, Strength Properties, Finite-Element Modeling, Mathematical Modeling, Physical Modeling, and Physical Experiment, etc.
	iv. Underwater Technologies: Underwater Communication, Marine Engineering, Power System, and Ocean Energy, etc.
	v. Applications: MEMS, Hetero-structures, Piezotransducers, Piezoactuators, Piezogenerators, Light-Emitting Diodes, Multimedia Communication, Fiber Reinforced Composites, etc.

KEYNOTES

Keynote Speech : 6th June, 2013 (Thursday)	
Chaired by Dean H.-C. Huang, Prof. Ivan A. Parinov, and Prof. C.-T. Lin	
Plenary-Keynotes 1	10:40 - 11:10
	"Distributed Underwater Sensing: A Paradigm Change for the Future" <i>Prof. T. C. Yang, National Sun Yat-sen University Visiting Chair Professor USA</i>
Plenary-Keynotes 2	11:10 - 11:40
	"Role of Orientation Effects in Forming the Large Hydrostatic Parameters in Composites Based on Relaxor-ferroelectric Single Crystals " <i>Prof. V. Yu. Topolov, Department of Physics, Southern Federal University, Russia</i>
Plenary-Keynotes 3	11:40 - 12:10
	"Title (to be provided)" <i>President Yan-Kuin Su, Kun Shan University, Taiwan</i>

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SESSION A1: Underwater Technologies

Room: Department of Microelectronics Engineering, 3rd floor, conference room

Chairs: Prof. T.C Yang, Dr. Maria S. Shevtsova

Thu. 6th June, 2013 14:00 - 15:15

Reference number	Title / Author
04j1	An Improved Dark Channel Based Algorithm for Underwater Image Restoration <i>Po-Fang Chen, Jun-Kai Guo, Chia-Chi Sung, and Heng-Hua Chang</i>
04ac	Denoising Algorithm Based on Fractal-Wavelet coding and its Application to Side-scan Sonar Image <i>Hsiao-Wen Tin, Shao-Wei Leu, Fu-Tai Wang, Chan-Chuan Wen, and Shun-Hsyung Chang</i>
04e2 / 04k6	Optimal Design of Underwater Acoustic Projector with Active Elements Made from Porous Piezoceramics <i>A. V. Nasedkin, M. S. Shevtsova, S.-H. Chang, and J.-K. Wu</i>

SESSION B1: Characterization and Research Methods

Room: Department of Marine Environmental Engineering, 3rd floor, conference room

Chairs: Director Mike Liaw, Prof. M.-K. Lee

Thu. 6th June, 2013 14:00 - 15:15

Reference number	Title / Author
04s3	The Effect of Impact Strength of CFRP on Adding the Nanofiber into the Epoxy Resin <i>Chih-Hsiang Liang , Chien-Hsu Chou, and Mike Liaw</i>
04s2	Improve the CFRP mechanical properties by using Taguchi method to optimize the formation conditions <i>Chih-Hsiang Liang and Mike Liaw</i>
04k5	Testing of Polymeric Composite for Aircraft Applications: Standards, Requirements and Limitations <i>V. S. Shevtsova and L. V. Chinchin</i>
04m3	Fabrications and Gas-sensing Performance of Tungsten Oxide Nanofibers <i>Papot Jaroenapibal, Janjira Muangban, Watchara Sukbua, and Napat Triroj</i>

2013 International Symposium on
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SESSION A2: Application

Room: Concert hall

Chairs: Prof. Ivan A. Parinov, Prof. J.-H. Lu

Thu. 6th June, 2013 15:40 - 17:00

Reference number	Title / Author
04q2	Corrosion Study of Hot dipped Al-Mg Coated Steel from Al Waste Panomkorn KWAKHONG Apichart ARTNASEAW <i>Lalita PIARASD, Pornnapa KASEMSIRI, and Chaiyaput KRUEHONG</i>
04p2	The Use of MDSM Structures for Cooling and Power of LEDs <i>G. Ya. Karapetyan, V. G. Dneprovski, and I. A. Parinov</i>
04d2	On Seismicity Driven Chaotic Model by DWT <i>Fu-Tai Wang, Chu-Tien Chen, Jenny Chih-Yu Lee, Shun-Hsyung Chang, Chin-Feng Lin, Hsiao-Wen Tin, and Wen-Jin Kao</i>

SESSION B2: Characterization and Research Methods

Room : Theatre

Chairs: Prof. C.-C. Yang, Prof. Papot Jaroenapibal

Thu. 6th June, 2013 15:40 - 17:00

Reference number	Title / Author
04a3	Determining Elastic and Dissipative Properties of Material Using a Combination of the Finite Element Method and Complex Artificial Neural Networks. <i>A. N. Soloviev, N. D. T. Giang, and S.-H. Chang</i>
04a4	The Development of Iterative Process of Solving Inverse Coefficient Problems for Inhomogeneous Electroelastic Materials <i>A. N. Soloviev, P. A. Oganessian, and C.-C. Yang</i>
04a5	Modeling of Composite Materials and Dynamic Testing of Structures with Their Use <i>A. N. Soloviev, E. N. Ziborov, and Jenny C.-Y. Lee</i>
04a6	Optimization of the Shape and Materials of Energy Harvesting Devices Based on Piezoelectric Elements <i>A. N. Soloviev, L. V. Duong, and J.-K. Wu</i>
04a7	Experimental-analytic Technique for the Identification of Defects in the Rod Structures <i>A. N. Soloviev, V. A. Akopyan, A. V. Cherpakov, and P. C. Wu</i>

SESSION C1: Materials

Room : Concert hall

Chairs: Prof. Igor P. Raevski, Prof. C.-D. Yang

Fri. 7th June, 2013 9:30 - 10:45

Reference number	Title / Author
04c4	Studies of Ferroelectric and Magnetic Phase Transitions in Multiferroic $\text{PbFe}_{0.5}\text{B}_{0.5}\text{O}_3 - \text{PbTiO}_3$ (B- Nb, Ta) Solid Solution Ceramics <i>I. P. Raevski, S. P. Kubrin, A. V. Blazhevich, M. S. Molokeev, S. V. Misjul, E. V. Eremin, H. Chen, E. I. Sitalo, S. I. Raevskaya, V. V. Titov, D. A. Sarychev, M. A. Malitskaya, and I. N. Zakharchenko</i>
04b8	Complex Investigations of Sapphire Crystals Production <i>Yu. V. Klunnikova and S. P. Malyukov</i>
04h1	Zinc Oxide and Its Applications <i>S.-H. Chang, C.-C. Yang, T.-H. Hu, S.-Y. Chen, and Ian Y.-Y. Bu</i>
04p1	Effect of Diammonium Phosphate Flame Retardant on Properties of Wood <i>Pornnapa Kasemsiri, Parinya Chindaprasirt, and Salim Hiziroglu</i>

SESSION D1: Materials

Room : Theatre

Chairs: Prof. Vitaly Yu. Topolov, Prof. M.-C. Shih

Fri. 7th June, 2013 9:30 - 10:45

Reference number	Title / Author
04c7	Dielectric and Piezoelectric Properties of NaNbO ₃ Ceramics at Low Temperatures <i>S. I. Raevskaya, E. I. Sitalo, D.V. Suzdalev, E. M. Panchenko, I. P. Raevski, H. Chen, C.-C. Chou, V. V. Titov, T. A. Minasyan, and M. A. Malitskaya</i>
04d4	Lead-free Ferroelectric Materials and the Environmentally Friendly Technological for Its Making. <i>I. A. Verbenko</i>
04m1	Characteristics of Schottky Tunneling Barrier InP MOSFET with TiO ₂ /Al ₂ O ₃ as Gate Oxides <i>Ming-Kwei Lee , Chih-Feng Yen, and Jung-Chan Lee</i>
04q1	Carbon Prepared from Local Residual Coffee by ZnCl ₂ Activation: Characterisation and Adsorption of Cu (II) <i>Khanita Kamwilaisak, Luksamone Kuboonya-aruk, and Chonticha Prajaksud</i>

2013 International Symposium on
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 Kaohsiung, Taiwan, June 5-8, 2013

SESSION C2: Materials

Room: Concert hall

Chairs: Prof. T.-Y. Sung, Dr. Andrey S. Vasiliev

Fri. 7th June, 2013 14:00 - 15:00

Reference number	Title / Author
04b3	VLSI Implementation of Low-power and High-speed Digital Frequency Synthesizer for Underwater Instruments and Network Systems <i>Ying-Shen Juang, Tze-Yun Sung, and Hsi-Chin Hsin</i>
04m4	Electrochemical Microfluidic Cell Integrated with Diamond-like Carbon Electrode for Enzymatic Glucose Detection <i>Napat Triroj1 and Rattanakorn Saensak</i>
04d1 / 04e1	Mathematical Modelling of the Problem About Interaction of Circular Flexible Plate with Elastic Half-space with Coating Inhomogeneous with Depth <i>S. M. Aizikovich, S. S. Volkov, A. S. Vasiliev, and B. I. Mitrin</i>
04g2	Electro-deposition Cu ₂ ZnSnS ₄ Solar Cell Materials on Mo/SLG Substrates <i>Min Yen Yeh, Yu-Jheng Liao, Dong-Sing Wu, Cheng-Liang Huang, and Chyi-Da Yang</i>

2013 International Symposium on
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Kaohsiung, Taiwan, June 5-8, 2013

SESSION D2: Synthesis & Processing

Room: Theatre

Chairs: Prof. H.-Y. Wang, Ms. Napat Triroj

Fri. 7th June, 2013 14:00 - 15:00

Reference number	Title / Author
04k9	Photonics Locks Structure with the Characteristics of Pulse Width Modulation <i>C. D. Yang, M. Y. Yeh, C. L. Huang, Y. H. Su, P. H. Lei, C. Y. Lee, S. H. Chang, and J. D. Chen</i>
04k7	Circuit Synthesis Using Pathological Elements <i>Hung-Yu Wang, Nan-Hui Chiang, and Quoc-Minh Nguyen</i>
04r1	Thermal Stress Analysis in Laser Soldering Process by 2-way Thermal – Solid Interaction Finite Element Method <i>Sirivit Taechajedcadarungsri and Arkom Budpet</i>

Poster Session I

Room: Department of Microelectronics Engineering

Chairs: Prof. Arkady N. Soloviev, Prof. M.-Y. Yeh, Prof. Y.-Y. Bu

Fir. 7th June, 2013 11:00-12:00

Reference number	Title / Author
04a2	Study of PIEZO-excited Lamb Waves in Laminated Composite Plates <i>Alexander Karmazin, Evgenia Kirillova, and Pavel Syromyatnikov</i>
0301	On Modeling Processes of State Diagnostics of the Layered Anisotropic Materials <i>I. P. Miroshnichenko</i>
03c2	Retardation and Relaxation Processes in $\text{Bi}_{1/2}\text{La}_{1/2}\text{MnO}_3$ Ceramics <i>A.V. Pavlenko, A.V. Turik, and L.A. Reznichenko</i>
03c3	Materials Based on Relaxor Ferroelectrics for Underwater Applications <i>M.V. Talanov and L.A. Reznichenko</i>
03c4	Experimental Substantiation of Early Diagnostic' Criteria of Complex Intense Structures <i>Ekaterina V. Saulina and Yury V. Esipov</i>
03c5	Electrical Characteristics of Lead-free Ceramics Modified 3d-metal Oxides <i>H.A. Sadykov, I.A. Verbenko, L.A. Reznichenko, L.A. Shilkina, S.I. Dudkin, and A.G. Abubakarov.</i>
03c6	The Study of Nanoscale Lithography Techniques for Formation of Aligned Single-placed Carbon Nanotubes <i>O.I. Ilin, I.N. Kotc, S.A. Lisitsyn, and A.A. Fedotov</i>
03c7	Study the Resistive Switching of Vertically Aligned Carbon Nanotubes by Scanning Tunnel Microscopy <i>O. A. Ageev, O.I. Ilin, M.V. Rubashkina, V.A. Smirnov, and A.A. Fedotov</i>

03d4	Development of Methodic of Sidewall Roughness Measuring of High Aspect Structures by Critical Dimension Atomic Force Microscopy <i>V.A. Smirnov, A. S. Kolomyitsev, and V.V. Tkachuk</i>
03e1	Circular Plate Bending on an Elastic Half-space with Composite Interlayer: Analytical Solution for the Problem S.M. Aizikovich, S.S. Volkov, A.S. Vasiliev, and B.I. Mitrin
03e2	Vibroacoustic Properties of Composite Three-layered Rotation Shells with Polymer Binding Under Vibration in Acoustic Medium <i>V. Safronenko and E. Donchenko</i>
03e3	Mathematical Modeling in Vibroacoustics of Multilayered Composite Polymeric Shells <i>V. Safronenko</i>
03e5	Investigation of the Memristive Titanium Oxide Nanostructures Formed by Local Anodic Oxidation <i>V.A. Smirnov, V.I. Avilov, and O.G. Tsukanova</i>
03e6	Microstructure and Physical Properties of $\text{Bi}_{1-x}\text{Re}_x\text{FeO}_3$ (Re – Tb, Dy, Ho, Er, Yb, Tm, Lu) Solid Solutions <i>A.A. Pavelko, V.A. Alyoshin, and L.A. Shilkina</i>
04a1	The Wireless Passive Sensors of Physical Parameters on the Surface Acoustic Waves <i>V.G. Dneprovsky, G. Ya. Karapetyan, G. P. Petin, and M. I. Bogdanov</i>
04a8	Direct and Inverse Problems of Internal and Sound Waves Propagation in the Ocean with a Complex Stratification Structure <i>A.N. Soloviev, S.M. Khartiev, D.G. Matishov, K.S. Grigorenko, and A.A. Solovieva</i>
04a9	Finite Element Analysis of the Piezoelectric Vibrating Gyroscope in the Form of a Hollow Cylinder <i>A.V. Nasedkin and E.I. Shprayzer</i>
04aa	Investigation of the Domain Structure Orientation of

	BiFeO ₃ by Piezoelectric Force Microscopy <i>N.I. Alyabieva, O.A. Ageev, Damien Mcgrouter, Ian Maclaren, Alessio Morelli, and Ionela Vrejiou</i>
04ab	Fuel Briquettes from Coal-bearing and Energy Potential of Waste <i>N. I. Buravchuk. And O. V. Guryanova</i>
04b1	Gas Multisensor Based on Nanostructured ZNO films of P- and N-TYPE <i>V. A. Gamaleev, E. Yu. Gusev, A. S. Mikhno, and S. A. Iurchenko</i>
04b4	XRD and XAFS Investigation of Pt/C Nanocatalysts for Low Temperature Fuel Cells <i>N. Filkova, V. Shmatko, N. Smirnova, A. Kuriganova, O. Klimenko, I. Leontyev, and G. Yalovega</i>
04b5	Composite SiO ₂ CuO _x Films for Nitrogen Dioxide Detection Technological Conditions, Properties, Structure <i>T. N. Myasoedova, V.A. Shmatko, V.V.Petrov, O. V. Zabluda, A.O. Funik, and G.E.Yalovega</i>
04b6	Investigation of the Modes Produce Anodic Oxide with Subsequent Growth of an Array of Vertically Aligned Carbon Nanotubes in It <i>V.S. Klimin, O.A. Ageev, K.S. Sergeenko, and A.S. Semenov</i>
04j2	Low-Power Wide-Bandwidth CMOS Folded Cascode OTA for $\Sigma\Delta$ ADC Applications <i>Cheng-Liang Huang, Guo-Shu Jian, Kuan-Ting Lu, Min-yen Yeh, and Chyi-Da Yang</i>
04k2	Bridgeless Boost Rectifier Based LED Driver Circuit <i>S.-H. Chang, C.-Y. Yang, R.-J. Syu, C.-S. Syu, J.-C. Wu, and S.-F. Chao</i>
04k3	Characteristics of Sol-Gel Synthesis of Yttrium Aluminum Garnet Phosphor <i>S.-H. Chang, C.-S. Syu, Y.-M. Liu, C.-Y. Yang, R.-J. Syu</i>
04m2	Liquid Phase Deposited Silicon Dioxide on GaAs With an Ultrathin Si Layer

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Kaohsiung, Taiwan, June 5-8, 2013

	<i>Chih-Feng Yen, Jung-Chan Lee, and Ming-Kwei Lee</i>
04n1	Preparation of Copper Oxide thin films by sol-gel method <i>Hsiang An Chen, Shun-Hsyung Chang, Ting Hao Hu, and Ian Y. Y. Bu</i>

Poster Session II

Room: Department of Microelectronics Engineering

Chairs: Prof. Jenny C.-Y. Lee, Prof. Y.-M. Liu, Prof. S.-F. Chao

Fir. 7th June, 2013 13:00-14:00

Reference number	Title / Author
04ba	Fabrication of ZnO Nanorod Arrays on the Conductive Film Sublayers and Investigation of Their Optical Properties <i>D.G. Nesvetaev, A.S. Puzikov, and E.M. Kaidashev</i>
04bb	Preparation and Investigation of ZnO Nanorods Array Based Resistive and SAW CO Gas Sensors <i>A.L.Nikolaev, G.Ya. Karapetyan, N.V. Lyanguzov, and E.M. Kaidashev</i>
04bc	Fabrication of ZnO-based Heterostructures with Au Nanoparticles and Their Photo-Electrical Properties <i>D.A. Zhilin, N.V. Lyanguzov E.M. and Kaidashev</i>
04bd	Carbothermal Synthesis and Characterization of ZnO Nanorod Arrays <i>N.V. Lyanguzov and E.M. Kaidashev</i>
04c2	Piezoelectric Sensitivity – Piezoelectric Anisotropy Relations in Porous PZT-TYPE Ferroelectric Ceramics <i>S.E. Filippov, A.A. Vorontsov, V.Yu. Topolov, and O.E. Brill</i>
04c3	Heterophase States in Ferroelectric Solid Solutions: A Crystallographic Interpretation of Experimental Data <i>V.Yu. Topolov</i>
04c5	The Effect of Mechanical Activation on the Synthesis and Properties of Multiferroic Lead Iron Niobate <i>A.A. Gusev, I.P. Raevski, E.G. Avvakumov, V.P. Isupov, S.P.Kubrin, D.A. Sarychev, V.V. Titov, A.M. Pugachev, S.I. Raevskaya, and V.V. Stashenko</i>
04c9	The Power Factors of Elastic Gear-like Bodies with

	Loaded Ledges <i>G. A. Zhuravlev and Y. E. Drobotov</i>
04ca	An Experimental Study on Photoacoustic Signals From Nanotubes and Nanofibers <i>D.V. Orda-Zhigulina and I.B. Starchenko</i>
04d3	Tests of High Accuracy Buckling Protective Membranes <i>N.V. Belikov, Y.M. Zanimonets, V.V. Pavlov, A.M. Kakurin, and A.S. Yudin</i>
04d5	Microwave Absorption and Dissipation Characteristics of Heterostructures in Systems $ABO_3-A'_2B_2O_7$ (A = Na; A' - Ca, Sr; B - Nb) <i>V.V. Gershenovich, L.A. Reznichenko, I.A. Verbenko, and L.A. Shilkina</i>
04e3	Multiscale Modeling of 1-3 Porous Composites with Physicomechanical Field Coupling <i>A.A. Nasedkina, A.V. Nasedkin, N.M. Smirnova</i>
04e4	Dynamic Problem of Steady-State Vibrations of Transversely-Isotropic Poroelastic Plane with Cavity of Arbitrary Shape <i>A.A. Lyapin</i>
04e6	Multilayer Nanostructured Antifriction Coating <i>N.A. Myasnikova, F.V. Myasnikov, A.V. Smelov, E.M. Kolosova, and M. Chebakov</i>
04f1	Mathematical Modeling in Problems of Vibrating Acoustics of Shells <i>A.S. Yudin</i>
04i1	Closed Axisymmetric Shell as a Flat Jacks <i>S.A. Yudin and T.V. Sigaeva</i>
04k4	Mathematical Modeling of Hyper-elastic Materials: Second Order Effects and Stability Issues <i>Mikhail Karyakin and Nataliya Shubchinskaya</i>
04k8	Multiobjective Optimization of Distributed RTM (resin transfer molding) Process for Curing the Large Composite Structures with Varied Thickness

	<i>S.N. Shevtsov , I.V. Zhilyaev, and M.B. Flek</i>
04m5	Bismuth Ferrite Dielectric Instability: Causes and Solutions <i>A.I. Miller, L.A. Shilkina, L.A. Reznichenko, I.A. Verbenko, and A.A. Pavelko</i>
04e5	Interpretation of Virus Unconventional Order in the Frame of Classical Elasticity Theory of Quasicrystal <i>O.V. Konevtsova, S.B. Rochal, and V. Lorman</i>
04b7	Harmonic Analysis of Nanosized Piezoelectric Bodies with Surface Effects: Mathematical and Finite Element Approaches <i>A.V. Nasedkin and V.A. Eremeyev</i>
04b9	Electronic Structure of Hydrogenated Carbon Nanotubes Studied by Core Level Spectroscopy and DFT calculation <i>V. Shmatko, M. Brzhezinskaya, G. Yalovega, E. Bogoslavskaja, A. Krestinin, I. Bashkin, and A. Klyushin</i>
04c6	Frequency Dependence of Polarization Hysteresis Loops in $\text{Pb}(\text{Fe}_{1/2}\text{Nb}_{1/2})\text{O}_3$ –Based ceramics <i>A.N. Pavlov, I.P. Raevski, T.A. Minasyan, H. Chen, V.V. Titov, C.-C. Chou, S.I. Raevskaya, and M.A.Malitskaya</i>
04c8	Studies of Dynamic Fatigue During Bipolar Switching of Soft Piezoelectric $(1-x)\text{Pb}(\text{Fe}_{1/2}\text{Nb}_{1/2})\text{O}_3 - x\text{PbTiO}_3$ Ceramics <i>S.I. Raevskaya, A.F. Semenchev, M.A.Malitskaya, H. Chen, V.V. Titov, C.-C. Chou, I.P. Raevski, T.A. Minasyan, and I.N. Zakharchenko</i>
0302	Optic Interference Means for Measurement of Displacements of the Control Object Surfaces <i>I. P. Miroshnichenko, I. A. Parinov, E. V. Rozhkov, V. P. Sizov, and S.-H. Chang</i>
03d2	Influence of Magnetic Field on Thermoelectricity Coefficient and Peltier Factor in InSb

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 Kaohsiung, Taiwan, June 5-8, 2013

	<i>G. Ya. Karapetyan, V. G. Dneprovski, and P. C. Wu</i>
03d3	Energetic Effectiveness of Piezoelectric Generators of Different Types <i>V. A. Akopyan, Yu. N. Zakharov, I. A. Parinov, E. V. Rozhkov, V. A. Chebanenko, and C.-C. Yang</i>
04n2	Optimization of the Photoanode Thickness for Dye-Sensitized Solar Cell <i>Ting Hao Hu, Shun-Hsyung Chang, and Ian Y.Y. Bu</i>
04s1	A Photocathode-Photovoltaic Cell (TiO ₂ -CIGS) for Solar-Driven Water Splitting for Hydrogen Evolution <i>Kee-Rong Wu, Chung-Hsuang Hung, Jr-Ping Wang, Chih-Chin Yang, and Lu-An Wang</i>
04g1	Low-loss Dual-Band Switchplexer Using Asymmetric Stepped-Impedance Resonators <i>Shih-Fong Chao and Wei-Cheng Lin</i>
04k1	Measurements for the Fabrication of the Hydrophone Application on Piezoelectric Film <i>S.-H. Chang, I.A.Parinov, K.-C.Hou, R.-J.Syu, C.-C. Yang, Ian Y.-Y. Bu, C.-D Yang, Jenny C.-Y Lee, J.-K. Wu</i>
03c1	Hilbert-Huang Transform Based Instantaneous Frequency Features For Underwater Voice (I) Transmission <i>C.F. Lin, K.J. Hsiao, C.C. Wen, S. H. Chang, and I. A. Parinov</i>