

SCIENTIFIC ISRAEL – TECHNOLOGICAL ADVANTAGES

Уважаемые коллеги,

Редакция журнала “Scientific Israel- Technological Advantages” (*SITA-Journal*) рада сообщить о выходе в свет двух последних номеров журнала №№ 1 и 2 .

SITA-Journal – ежеквартальный журнал , публикующий фундаментальные научные и научно-прикладные статьи в области нанотехнологии, материаловедения, строительства и охраны окружающей среды.

Подробную информацию о журнале, включающую инструкцию для авторов и условия подписки, можно найти на сайте

www.sita-journal.com

С уважением,
Проф. О.Л. Олег Фиговский
Главный редактор

Editorship:

Prof. O. FIGOVSKY Editor-in-Chief (*Israel*)
Dr. D. BEILIN Managing Editor (*Israel, USA*)

Prof. M-J.Abadie (*France*)
Prof. H-J. Adler (*Germany*)
Prof. S. Aidarova (*Kazakhstan*)
Dr. E.Barsky (*Israel*)
Dr. N. Blank (*Israel*)
Prof.A.Bolonkin (*USA*)
Prof. J-C Bordado (*Portugal*)
Prof. M. Bratychak (*Ukraine*)
Prof. A. Fainleib (*Ukraine*)

Prof. V. Kestelman (*USA*)
Dr.V. Krasnopolsky (*USA*)
Prof. E. Levich (*Israel, USA*)
Prof. G. Muravin (*Israel*)
Prof. D. Pashin (*Russia*)
Prof. A. Ponomarev (*Russia*)
Dr. L. Shapovalov (*Israel*)
Eng. A. Trossman (*Israel*)



SCIENTIFIC ISRAEL – TECHNOLOGICAL ADVANTAGES

ISSN: 1565-1533
VOL.18, 2016, No.1

RUSSIAN ACADEMY OF ENGINEERING
25 ANNIVERSARY



EDITOR-IN-CHIEF
Prof. Oleg FIGOVSKY

MANAGING EDITOR
Dr. Dmitry BEILIN

CONTENTS

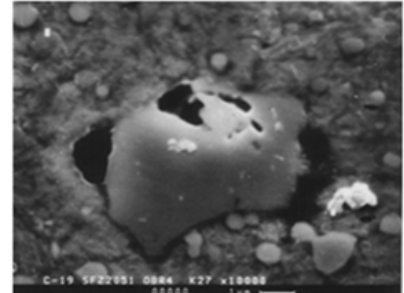
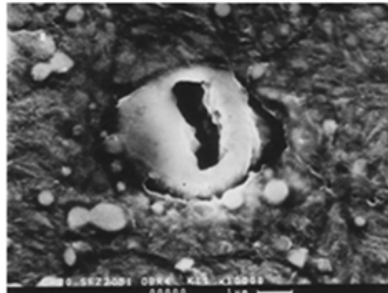
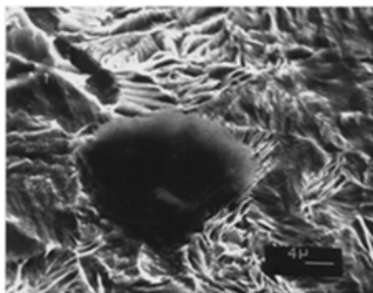
| | |
|--|-----|
| Russian Academy of Engineering- 25 anniversary | 2 |
| B.V.Gusev, Y.A. Galushkin, Samuel Yen-Liang Yin, A.A. Speransky Fundamental Triad of Knowledge and Volume Periodicity in Structure of Physical-Chemical Elements | 5 |
| S. P. Bykov, M. V. Davydkin, O.V. Nemykina The Investigation of the Resistance of Weld Overlay for Sealing Surface of Piping Accessories Unit | 15 |
| D.V. Inshakov , S.P Bykov ,K. A. Kuznetsov PAKT-04: Device And Non-Destructive Testing of Heat-Exchange Equipment | 19 |
| A.P. Khomenko, S.V. Eliseev, A.I. Artyunin, A.V. Eliseev Mathematical Modeling of Dynamical Vibrating Interaction Problems of Mechanical Systems with «Not Holding» Ties | 28 |
| A.P. Khomenko , S.V. Eliseev, A.I. Artyunin, R.S. Bolshakov Method of Structural Transformations in Identification of Dynamical Responses in Mechanical Oscillation Systems | 43 |
| V. Zakaryukin , A. Kryukov, A. Kushov , M. Shulgin Parametric Identification of High-Voltage Power Lines | 65 |
| V.F. Kuzin Innovative Technologies of "Mikhailovsky Processing Plant" to Implement Russian Ore Base Development Strategy | 82 |
| A. V. Seleznev, R. G. Mubarakov The Chlorine Balanced Schemes of Natural Gas and Rock Salt Complex Processing into Polymers | 86 |
| A.N. Shichkov Designing Manufacturing-Technological Systems | 91 |
| A. M. Kuznetsov, S. Y. Trutaev, S.P. Bykov Innovative Approaches to the Technical State Rating of the Main Funds of Industrial Plants | 109 |
| P.G.Kudryavtsev, O.L.Figovsky, N.P. Kudryavtsev Nanocomposites Based on Hybrid Organo-Silicate Matrix | 114 |
| O.Figovsky , D. Beilin Polymer Nanocomposites with High Resistance to Aggressive Environment | 135 |
| B.V.Gusev , Jenn-Chuan Chern, A.A. Speransky Waves of Innovation, and Sustainable Development of Industry on an Example of Construction | 164 |



SCIENTIFIC ISRAEL - TECHNOLOGICAL ADVANTAGES

ISSN: 1565-1533
VOL.18, 2016, No.2

MATERIALS ENGINEERING
&
NEW TECHNOLOGIES



EDITOR-IN-CHIEF
Prof. Oleg FIGOVSKY

MANAGING EDITOR
Dr. Dmitry BEILIN

CONTENTS

| | |
|---|-----|
| M.A. Gamov, V.M.Zadorsky Synergetic Basis Tools and Methods of Process Control in Capillary-Porous Materials | 3 |
| B.V. Gusev Nanostructuring of Concrete Materials | 10 |
| M. Ioelovich Isophase and Phase Transitions of Cellulose (Short Review) | 14 |
| M. Ioelovich Physicochemical Methods for Determination of Cellulose Crystallinity | 35 |
| O. Figovsky, D. Beilin Nanotechnology in Production of Bioactive Paints, Coatings and Food Storage Materials | 43 |
| O. Figovsky, D. Beilin, S. Usherenko1, P. Kudryavtsev Environmental Friendly Method of Production of Nanocomposites and Nanomembranes | 55 |
| E. Shahbazov, K. Jabbarova Anti-Saline Deposit Nanosystem in Oil Production | 107 |
| V. Rotkin, Y. Sokolovsky Energy Efficiency of Bladed Wind Turbine. Optimization Model | 111 |
| A.M. Zaytsev The Analytical Solution of the Problem of Warming up of the Sandwich Constructions at Fires | 124 |
| S.A.Kolodyazhniy, R.A. Sheps , T.V. Shchukina Prospects and Implications of Structural Insulated Panels in Low-Rise Construction | 136 |
| K.K. Kishibayev, S.A. Efremov, N.L. Voropaeva, N.D. Dolgova, M.-J Fernández-Sanjurjo, E. Álvarez, M.K. Nauryzbaev , S.V. Nechipurenko , Kh.S.Tasibekov , V.V. Karpachev Activated Carbons of Different Nature for Gold Extraction Processes | 145 |

LETTERS

| | |
|---|-----|
| V. Gumarov Airships as a Unique Platform for Developing New Technologies and Implementing Non-Standard Engineering Solutions | 159 |
|---|-----|

NEWS & EVENTS

| | |
|---|-----|
| Prof. Oleg Figovsky was awarded the Order "Engineering Glory" | 167 |
|---|-----|