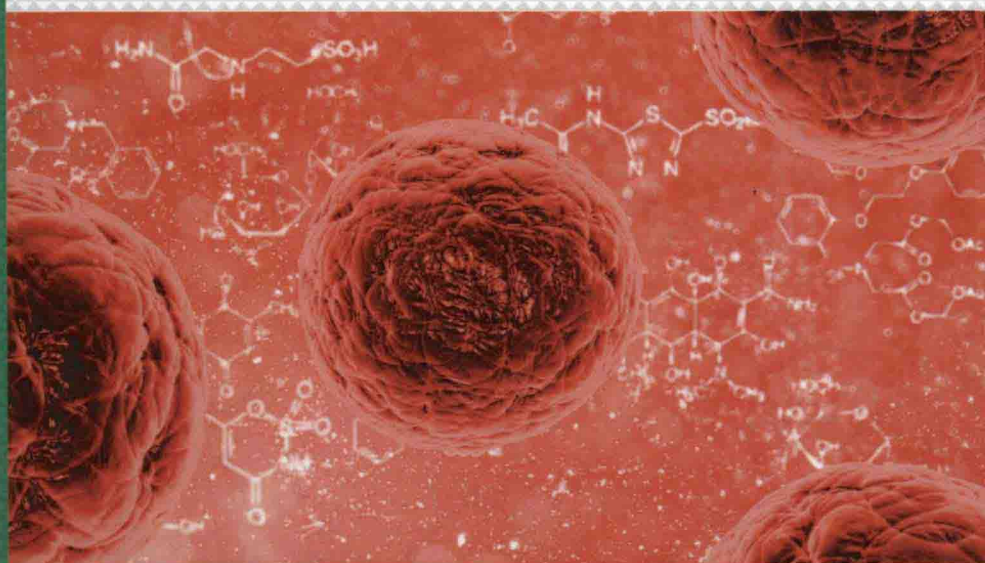


Volume 3

Physical Chemistry Research for **Engineering** and **Applied Sciences**

High Performance Materials and Methods



Editors

Eli M. Pearce, PhD

Bob A. Howell, PhD

Richard A. Pethrick, PhD, DSc

Gennady E. Zaikov, DSc

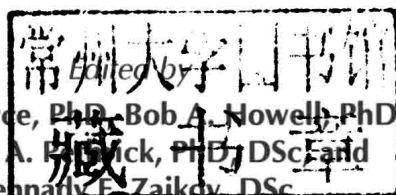
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VOLUME 3

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Richard A. Farnick, PhD, DSc and
Gennady E. Zaikov, DSc

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**PHYSICAL CHEMISTRY
RESEARCH FOR ENGINEERING
AND APPLIED SCIENCES**

VOLUME 3

High Performance Materials and Methods

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CONTENTS

<i>List of Contributors</i>	<i>xi</i>
<i>List of Abbreviations</i>	<i>xv</i>
<i>List of Symbols</i>	<i>xix</i>
<i>Preface</i>	<i>xxiii</i>
1. Regularity of Oxidation of Waste Fibrous and Film Materials of Polyethylene and Polypropylene: A Research Note	1
M. V. Bazunova, S. V. Kolesov, R. F. Tukhvatullin, E. I. Kulish, and G. E. Zaikov	
2. A Research Note on Creation Carbon Polymer Nanocomposites with Polyethylene as a Binder.....	9
Sergei V. Kolesov, Marina V. Bazunova, Elena I. Kulish, Denis R. Valiev, and Gennady E. Zaikov	
3. A Research Note on the Influence of Hybrid Antioxidants Ichphans on the Structure of Liposome Lipid Bi Layer	19
E. Yu. Parshina, L. Ya. Gendel, and A. B. Rubin	
4. Dynamically Vulcanized Thermoelastoplastics Based on Butadiene-Acrylonitrile Rubber and Polypropylene Modified Nano Filler.....	25
S. I. Volfson, G. E. Zaikov, N. A. Okhotina, A. I. Nigmatullina, O. A. Panfilova, and A. A. Nikiforov	
5. Model Representations of the Effect of Temperature on Resistance Polypropylene Filled with Carbon Black.....	35
N. N. Komova and G. E. Zaikov	
6. A Research Note on Kinetics of Release Medicinal Substances from Chitosan Films	47
Angela Shurshina, Elena Kulish, and Roman Lazdin	
7. Viscometry Study of Chitosan in Acetic Acid Solution: A Research Note	57
Valentina Chernova, Irina Tuktarova, Elena Kulish, Gennady Zaikov, and Alfiya Galina	

8. The Role of H-Bonding Interactions (and Supra Molecular Nanostructures Formation) in the Mechanisms of Homogenous and Enzymatic Catalysis by Iron (Nickel) Complexes	63
L. I. Matienko, L. A. Mosolova, V. I. Binyukov, E. M. Mil, and G. E. Zaikov	
9. Nanocomposite Foils Based on Silicate Precursor with Surface-Active Compounds: A Research Note	101
L. O. Zaskokina, V. V. Osipova, Y. G. Galyametdinov, and A. A. Momzyakov	
10. Interaction of the 1,1,3-Trimethyl-3-(4-Methylphenyl) Butyl Hydro Peroxide with Tetraethyl Ammonium Bromide.....	109
N. A. Turovskij, Yu. V. Berestneva, E. V. Raksha, M. Yu. Zubritskij, and G. E. Zaikov	
11. Promises of Personalized Medicine in 21st Century.....	121
Sanjay Kumar Bharti and Debarshi Kar Mahapatra	
12. Some Aspects of Molecular Mechanics and Dynamics Interactions of Nanostructural Elements	153
A. V. Vakhrushev and A. M. Lipanov	
13. A Detailed Review on Structure and Properties of High Performance Carbon Nanotube/Polymer Composites.....	187
A. K. Haghi and G. E. Zaikov	
14. Controlled Immobilized Enzymes as Catalysts with Particular Application in Industrial Chemical Processes.....	241
M. S. Mohy Eldin, M. R. El-Aassar, and E. A. Hassan	
<i>Index.....</i>	<i>265</i>

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LIST OF ABBREVIATIONS

ADRs	Adverse Drug Reactions
AFM	Atomic-Force Microscopy
AIREBO	Adaptive Intermolecular Reactive Empirical Bond Order
AMA	American Medical Association
ARD	Acireductone Dioxygenase
BD	Brownian Dynamics
Bu	Butyl Radical
CAP	College of American Pathologists
CNT	Carbon Nanotube
CNV	Copy Number Variants
CO	Carbon Monoxide
CS	Cellulose
CTAB	Cetyl Trimethyl Ammonium Bromide
De	Diffusion coefficient
DFT	Density Function Method
DMF	Di Methyl Form amide
DNMT	DNA Methyl Transferases
DPD	Dissipative Particle Dynamics
DSC	Differential Scanning Calorimetry
DTC	Direct-To-Consumer
DWNTs	Double Walled Carbon Nanotubes
ER	Estrogen Receptor
FDA	Food and Drug Administration
FEM	Finite Element Method
GCK	Glucokinase
GINA	Genetic Information Non-discrimination Act
GSDBT	Generalized Shear Deformation Beam Theory
GWAS	Genome-Wide Association Studies
HGP	Human Genome Project
His	Histidine-Ligands
HIT	Healthcare Information Technology
HMPA	Hexa Methyl Phosphorotri Amide
HNF-1 α	Hepatocyte Nuclear Factor-1 α
HNF-1 β	Hepatocyte Nuclear Factor-1 β
HO	Haem Oxygenase

HP	Hydro Peroxide
HTS	High Temperature Shearing
IPS	Intellectual Property System
LB	Lattice Boltzmann
LBHBs	Low-Barrier Hydrogen Bonds
LD	Local Density
LDPE	Low Density Polyethylene
mAbs	Monoclonal Antibodies
MC	Monte Carlo
MD	Molecular Dynamics
MiR	MircoRNA
MMT	Montmorillonite
MODY	Maturity-Onset Diabetes of Young
MSP	Methionine Salvage Pathway
MWNTs	Multi-Walled Nano Tubes
NC	Nano Carbon
NIH	National Institutes of Health
NO	Nitrogen Monoxide
OCT	Organic Cation Transporter
PBQ	p-benzoquinone
PE	Polyethylene
PEH	Phenyl Ethyl Hydroperoxide
PhTEOS	Phenyl Trimethoxysilane
PM	Personalized Medicine
PP	Polypropylene
PPARG	Peroxisome Proliferator-Activated Receptor- γ
PSDT	Parabolic Shear Deformation Theory
PTO	Patent and Trademark Office
PZT	Plumbum Zirconate Titanate
QC	Quasi-Continuum
QM	Quantum Mechanics
RBM	Radial Breathing Mode
RVE	Representative Volume Element
SJS	Stevens-Johnson syndrome
SNPs	Single Nucleotide Polymorphisms
SubSIP	Substrate Separated Ion Pair
SWNTs	Single Walled Nano Tubes
TBMD	Tight Bonding Molecular Dynamics
TEN	Toxic Epidermal Necrolysis
TG	Thermogravimetric Method
TSGs	Tumor Suppressor Genes
UC	University of Cincinnati