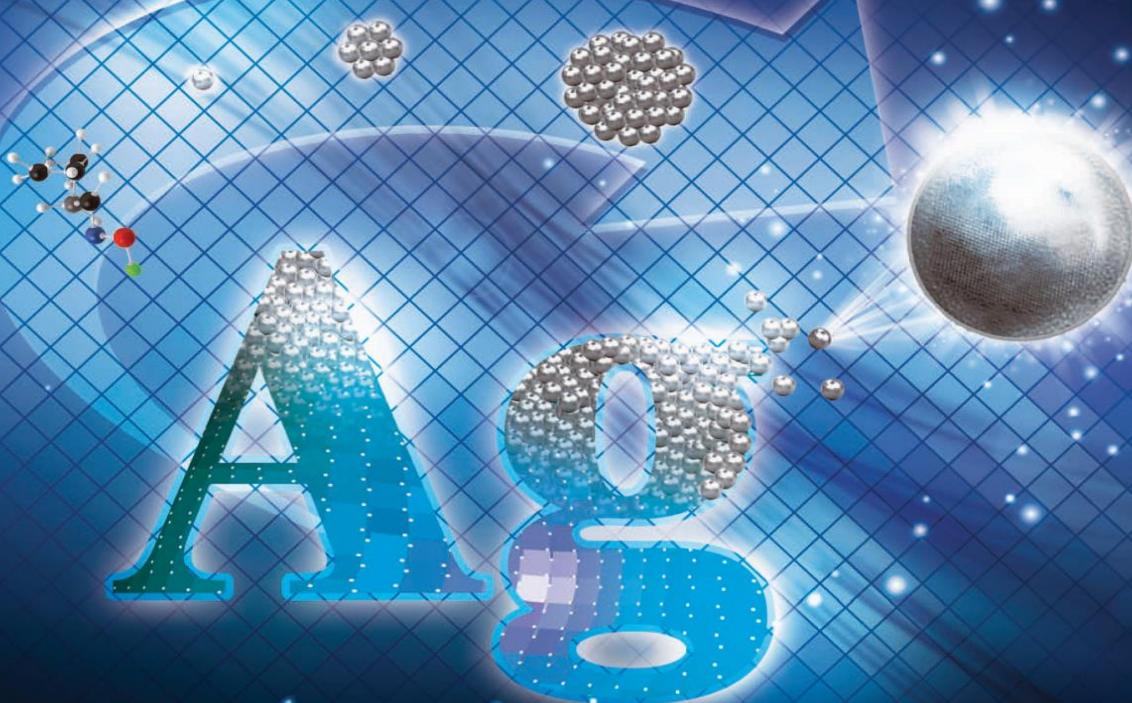


# New Materials Compounds and Applications



Vol.8, No.1, 2024

## CONTENTS

**Vol.8, No.1, 2024**

**A.A. Abdullayeva, N.E. Ahmadova, G.T. Atakishiyeva, N.R. Zeynalli, I.M. Shikhaliyeva, Sh.A. Ibrahimova, I.J. Ahmadova, N.Q. Shikhaliyev, A.A. Maharramov (pp.5-12)**  
Molecular docking of 4-azido-2-(4-substituted-phenyl)-5-(2-nitrophenyl)-2h-1,2,3-triazoles

**L. Bobokhidze, A. Gogolashvili, I. Chikvaidze (pp.13-23)**

Novel synthetic investigation in the field of indolo[2,3-b]quinoxaline ring containing tetracyclic and pentacyclic heterocycles

**S.D. Demukhamedova, I.N. Aliyeva (pp.24-42)**

Computer simulation of the structure of some azo-derivatives of  $\beta$ -diketones by the methods of quantum chemistry

**R.A. Dawoud, R.S. Shehata, H. Moawod, S.S. Ncibi, S.A. Hasan (pp.43-61)**

Impact of bio-organic fertilization and nitrogen levels on maize (*Zea mays L.*) resilience

**M. Hasanov, N. Akhmedov, R. Bashirov, S. Piriev, O. Boiprav, N. Ismailov (pp.62-74)**

The development of a piezoelectric defect detection device through mathematical modeling applied to polymer composite materials

**K.I. Alzand, H.R. Younis, H.D. Salman, A.N. Jasim (pp.75-86)**

*Citrus aurantium L.* peels and seeds: Phytochemical screening and antibacterial activity

**A.F. Gochuyeva, A.M. Mehdiyeva, S.V. Bakhshaliyeva (pp.87-93)**

Study of the effect of photo quenching of electrical conductivity under the action of light in polymer-ferrocene composites

**S.H.M. Sheet, R.B. Mahmod, N.H.M. Saeed, S.M. Saied (pp.94-108)**

Theoretical study for comparison of pKa of a number of Achiff bases by employing parameters derived from DFT and MP2 method

**N.I. Mahmudova, S.E. Mammadov, A.Z. Mamedova, N.F. Akhmedova, T.M. Ilyasli (pp.109-120)**

Study of catalytic behaviours of the spinel structure  $Nd_xMg_{1-x}Al_2O_4$  composition with ZSM-5 zeolite in ethylbenzene disproportionation

**Kh.Kh. Hashimov, T.M. Isayeva (pp.121-134)**

X-ray graphic study of structural transformations in crystals of  $Cu_{2-x}Ni_{0.05}S$  ( $x = 0.05, 0.25, 0.30$ )

**L.K. Abdullayeva, M.H. Hasanov (pp.135-141)**

Investigation of the role of metal in non-alloy metal-semiconductor (Si) contact

**S.R. Bagirova (pp.142-147)**

Investigation of the influence of polyvinyl pyrrolidone (PVP) on hydration processes in electrolytes