

# MANVEL TUMANYAN

## Personal Information:

**Date of birth:** 08March, 1972  
**Place of birth:** Berd, Tavush, Armenia  
**Citizenship:** Republic of Armenia  
**Sex:** Male  
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## Education

**1991-1996** - National Polytechnic University of Armenia, Faculty of Electrical Engineering, Bachelor's degree

## Professional Experience

**2003- 2021-** A.B. Nalbandyan Institute of Chemical Physics NAS RA, Senior Engineer

**1998 - 2003** - Electric Networks of Armenia, Berd's branch, Engineer

**1996 - 1998** -RA Army

**1989 - 1991-**Livestock factory of Berd, Operative

## Grants and Awards

**2011** -Committee of Science of the RA, "Refractory Metal (W, Mo) Nanopowders Produced by Metallothermic Reduction of Salts", Code 11\_1d167

**2013** -Committee of Science of the RA, "Kinetics of High-temperature Heterogeneous Reactions in the Mechanically Activated Systems", Code 13RF-057

**2013** -Committee of Science of the RA, "Mo-Cu Composite Nanomaterials (Pseudoalloys). Combustion Synthesis and Characterization", Code13-1D192

**2015** -ISTC award #A-2123, "Combustion Synthesis and Characterization of W-Cu Composite Nanomaterials"

**2015** -Committee of Science of the RA, "Solution combustion synthesis of nanoscale non-oxide catalytic systems and characterization. Molybdenum carbide as an example", Code 15T-1D196

**2018** -Committee of Science of the RA, "Non isothermal kinetics of solid state reactions. Influence of heating rate", Code 18T-1D051

**2020** - Committee of Science of the RA, "High entropy oxides by combustion synthesis and their sparkly consolidation for magnetic and electrochemical applications", Code20TTWS-2F040

**2021** - Committee of Science of the RA, "Synthesis and spark plasma sintering of high-entropy alloys: Fundamental study of reaction pathway and properties of materials", Code 20RF-154.

## Computer Skills

MS Word, MS Excel, MS Access, MS PowerPoint, Photoshop, ISMAN Thermo Software, ImageJ, MS Jade, HSC-5, Prefix, Origin, Chemix, Internet

### **Language Skills**

Russian - Fluent

English -Intermediate

### **Publications**

- 1.S.V. Aydinyan, Kh.T. Nazaretyan, A.G. Zargaryan, M.E. Tumanyan, S.L. Kharatyan, Reduction mechanism of  $WO_3 + CuO$  mixture by combined Mg/C reducer, Journal of Thermal Analysis and Calorimetry 133(1), 2018, 261-269
- 2.Kh.T Nazaretyan, H.V. Kirakosyan, Kh.Gh. Kirakosyan, M.E. Tumanyan, S.V. Aydinyan, S.L. Kharatyan, Nanosize molybdenum carbide preparation by sol-gel combustion synthesis with subsequent fast heating, Chemical Journal of Armenia 70(1-2), 2017, 11-19
- 3.S.V. Aydinyan, H.V. Kirakosyan, O.M. Niazyan, M.E. Tumanyan, Kh.T. Nazaretyan, S.L. Kharatyan, Reaction pathway in the  $WO_3-CuO-Mg-C$  system at nonisothermal conditions, Armenian Journal of Physics, 9(1), 2016, 83-88.

### **Conferences**

1. Aydinyan A.V., Kirakosyan Kh.G., Tumanyan M.E., Zargaryan A.G., Kharatyan S.L., The Reaction Mechanism in the  $MoO_3-Mg-C$  System at Non-Isothermal Conditions. High Heating Rates, 2012, 124-125
2. S.V. Aydinyan, H.V. Kirakosyan, M.E. Tumanyan, Kharatyan S.L., Combustion Synthesis of Cu-W Pseudoalloys from Oxide/Salt Precursors, 2015, Book of Abstracts, 143-144
3. Aydinyan S., Kirakosyan H., Niazyan O., Tumanyan M., Nazaretyan Kh., Kharatyan S., Reaction pathway in the  $WO_3-CuO-Mg-C$  system at nonisothermal conditions / 2015, 94-95
4. Kirakosyan Hasmik, Nazaretyan Khachik, Aydinyan Sofiya, Tumanyan Manvel, Kharatyan Suren, A New Synthesis Pathway for Molybdenum Carbide Nanopowder by Solution Combustion, 2017, 35-36