

TABLE OF CONTENTS

Introduction to the Collection of Articles of the II International Scientific and Technical Conference "Non-Rocket Space Industrialization: Problems, Ideas, Projects"	7
Opening Speech by A. Unitsky, Chairman of the Organizing Committee of the II International Scientific and Technical Conference "Non-Rocket Space Industrialization: Problems, Ideas, Projects"	12
Welcome Speech by P. Klimuk, Vice-Chairman of the Organizing Committee of the II International Scientific and Technical Conference "Non-Rocket Space Industrialization: Problems, Ideas, Projects"	14
Opening Speech by Yu. Pleskachevskiy, Vice-Chairman of the Organizing Committee of the II International Scientific and Technical Conference "Non-Rocket Space Industrialization: Problems, Ideas, Projects"	16
Opening Speech by Bapi Dash, Co-Chairman of the Organizing Committee of the II International Scientific and Technical Conference "Non-Rocket Space Industrialization: Problems, Ideas, Projects"	18
Opening Speech by Hussain Al Mahmoudi, Member of the Organizing Committee of the II International Scientific and Technical Conference "Non-Rocket Space Industrialization: Problems, Ideas, Projects"	20
Historical background of the SpaceWay program as the only way to sustainable development of the technocratic civilization A. Unitsky	23

SpaceWay program as the only possible scenario to save the earthly technocratic civilization from extinction and death A. Unitsky	31
Description of the structural elements of the SpaceWay astroengineering transport system A. Unitsky	41
Features of design of a residential space cluster "EcoCosmoHouse" – mission, goals, purpose A. Unitsky	51
Socio-political framework of SpaceWay program implementation E. Petrov	59
Space industrialization megaprojects: rocket, space elevator, StarTram, General Planetary Vehicle A. Unitsky, I. Nadeev	65
Creating a mathematical model of the General Planetary Vehicle: accelerating flywheels, passing the atmosphere, going into orbit A. Unitsky, R. Sharshov, A. Abakumov	77
Innovative business models in the EcoSpace program complex K. Badulin	85
Blockchain as a single information and economic basis for an Equatorial Linear City, its transport systems and General Planetary Vehicle E. Kabanov	91
Economic efficiency justification of SpaceWay program implementation for the participating countries on the example of Brazil A. Unitsky, S. Voloshina, V. Lavrinenko	97

Space industrialization is a new era of human development and a necessary step to save the Earth's biosphere (economic justification) A. Babayan	103
Principles and forms of international cooperation in implementation of the SpaceWay program A. Kazakevich	111
Readiness of modern digital technologies for the development and manufacturing of astroengineering structures A. Voylenko	117
Creative constructivism of the EcoSpace megasystem design and development: engineering creativity with Modern TRIZ – reinventing and perspectives M. Orloff	125
Special aspects of management methods for design of the EcoCosmoHouse facility on the planet Earth D. Kaznacheev	133
Principles of building a healthy environment for human life, work, development and recreation in EcoCosmoHouse N. Yerakhovets	139
Trophic chains and biological rhythms as the basis for the creation of the EcoCosmoHouse biosphere A. Unitsky, O. Sinchuk	145
EcoCosmoHouse as a space for the conservation of species diversity of tropical and subtropical flora A. Unitsky, V. Pavlovsky, D. Feofanov	153
Economic replication model of the EcoCosmoHouse facility on the planet Earth A. Unitsky, A. Kushnirenko, E. Kulik	159

Review of possible structural solutions of the EcoCosmoHouse facility on the planet Earth A. Unitsky, S. Zhary, A. Bonus, N. Yerakhovets	169
Soil and soil microorganisms in EcoCosmoHouse biosphere A. Unitsky, E. Solovyova, N. Zyl	179
Systems for maintaining optimal climatic parameters of EcoCosmoHouse on the planet Earth A. Unitsky, V. Grigoryev	185
Plants of special purpose and their use in EcoCosmoHouse N. Zyl, N. Batalevich, E. Shakhno	191
Use of chlorella for oxygen production and wastewater treatment in closed ecosystems A. Unitsky, O. Sinchuk	199
Methods to convert solar radiation energy into electricity for the needs of Industrial Space Necklace "Orbit" A. Unitsky, V. Yanchuk	207
Hydrosphere of EcoCosmoHouse on the planet Earth and its components A. Unitsky, A. Borichevsky	217
Equatorial Linear City as an alternative to the concept of smart cities A. Unitsky, S. Semyonov	223
Resolution of the II International Scientific and Technical Conference "Non-Rocket Space Industrialization: Problems, Ideas, Projects"	230
Glossary of terms and definitions used in the Collection of Articles	234