## Contents

ARCHITECTURE AND URBAN PLANNING:
Nikos A. Salingaros
Eight city types and their interactions: the "eight-fold" model
CHEMISTRY:
Barbara Michorczyk, Elżbieta Hędrzak
Study of oxidative coupling of methane integrated with CO oxidation
ENVIRONMENTAL ENGINERING:
Michał Grodecki
Numerical modelling of gabion joints81
Adam Kasprzak, Paweł Popielski
Comparison of temparature and displacements of a gravity section and a buttress section
illustrated with the example of concrete dam in Rożnów
Justyna Kwaśny, Wojciech Balcerzak
Characteristics of selected methods for the synthesis of nanometric zirconium oxide –
critical review103
Dawid Łątka
Stress state laboratory verification in masonry structures according to the flat jack method117
Michael Poehler, Paul Uwe Thamsen
Design of a decentralised intelligent network for five wet pit pumping stations127
MECHANICS:
Zygmunt Domagała, Krzysztof Kędzia
Analysis, modelling and verification of the phenomena occurring in a hydraulic prop
during dynamic load137
Karolina Głogowska, Janusz W. Sikora
The production and properties of micro-extruded low-density polyethylene microtubes 153
Marek S. Kozień, Dariusz Smolarski
Comparison of results of stress cycle counting by the direct spectral method and
the Fu-Cebon method for bi-modal type stress processes