

Contents

ARCHITECTURE AND URBAN PLANNING:

Patrycja Haupt

In the land of the elements. Nature in the recreational spaces of the cities of Finland.....5

CHEMISTRY:

Monika Gwadera, Krzysztof Kupiec

Diffusion with chemical reaction – assessment of the accuracy of an approximate kinetic model for spherical pellets..... 19

Elżbieta Hędrzak, Piotr Michorczyk

The application of 3D printing in the designing of channel structures in monolithic catalysts dedicated to the oxidative coupling of methane..... 31

Adam Kozak, Aleksander Kozak, Beata Fryźlewicz-Kozak

An unified formula for deriving the molecular composition of hydrocarbons..... 41

Arkadiusz Matwijczuk, Alicja Matwijczuk, Dariusz Karcz, Sławomir Wybraniec,

Dariusz Kluczyk, Mariusz Gagoś, Andrzej Niewiadomy
Spectroscopic studies of dual fluorescence effects in a selected 1,3,4-thiadiazole derivative in organic solvents and aqueous solutions..... 47

Jakub Szyman, Bolesław Tabiś

The implementation of a mathematical model of variously structured bioreactors cascades.. 63

CIVIL ENGINEERING:

Łukasz Bednarski, Rafał Sieńko, Tomasz Howiacki, Mariusz Poślajko

The monitoring of a substrate strengthened with concrete columns 73

Tadeusz Majcherczyk, Zbigniew Niedbalski

The influence of underground coal mining on an overhead high-voltage power line..... 87

Grzegorz Świt, Anna Adamczak

Stress corrosion of epoxy-glass composites monitored using acoustic emission 101

Andrzej Więckowski

Influence, of time randomness execution of work, on lenght of the construction cycle..... 115

ENVIRONMENTAL ENGINEERING:

Paweł Falaciński

Influence of fly ash from the thermal treatment of municipal sewage sludge on chosen properties of hardening slurries 125

Paweł Popielski, Apoloniusz Kodura, Błażej Smoliński

Analysis of the technical condition of the sewage collector with the use of numerical simulation..... 139

Małgorzata Kryłów, Piotr Rezka	
<i>Polybrominated flame retardants in sewage sludge and sediments (review)</i>	153
Sebastian Kujawiak, Małgorzata Makowska, Radosław Matz, Anna Gawrońska	
<i>The efficiency of the aeration process in airlift reactors with moving beds</i>	167

MECHANICS:

Krzysztof Kędzia	
<i>An algorithm for the determination of the control parameters of a multisource drive system</i>	173
Anna Korzeń, Dawid Taler	
<i>Mathematical modelling of the unsteady operation of a plate and fin heat exchanger for the time-varying mass flow rate of liquid and air velocity</i>	183
Paweł Ziółkowski, Janusz Badur	
<i>A thermodynamic and technical analysis of a zero-emission power plant in Pomerania</i>	197

