

CONTENTS

| | |
|---|-----|
| Utilisation of Metallurgical Slags as Raw Material Basis for Preparation of Alkali Activated Materials <i>Zdeněk Adolf, Jiří Bažan</i> | 11 |
| Evaluating the Potential Application of Fly Ash/ Blast Furnace Slag Geopolymer Material for Inhibiting Acid Corrosion, a Comparative Study <i>Ali Allahverdi, František Škvára</i> | 21 |
| Gypsum-Free Portland Cement, an Alkali-Activated Material Suitable for Acid Corrosion Protection <i>Ali Allahverdi, František Škvára</i> | 39 |
| Investigating the Set and Strength Behaviours of Blast - Furnace Slag Blended Geopolymer Cement Based on Natural Pozzolan <i>Ali Allahverdi, Mahshad Yazdanipour, Mohammad Hashemi</i> | 55 |
| Alkali-Activated Slag Concrete for the Production of Building Elements <i>Vlastimil Bílek</i> | 71 |
| Development, Properties and Production of Geopolymers Based on Secondary Raw Materials <i>Oleg Bortnovsky, Karla Dvořáková, Pavel Roubíček, Jaroslav Boušek, Žaneta Průdková, Pavel Baxa</i> | 83 |
| Composite Materials with Geopolymer Matrix, Past, Present and Future <i>Jiří Brandštetr, Jaromír Havlica, Tomáš Opravil</i> | 97 |
| Influence of Alkali Activation of Martin Slag on the Durability of Construction Building Products <i>V.I. Bratchun, A.N. Bachurin, N.P. Nagornaya</i> | 111 |
| The Influence of Clinoptilolite Zeolites on the Properties of Alkali Activated Slag Pastes <i>Witold Brylicki, Jan Małolepszy, Stanisław Stryczek, Łukasz Kotwica</i> . | 123 |

| | |
|---|-----|
| The Suitability of Different Clay Resources in Respect to Form Geopolymeric Binders <i>A. Buchwald, M. Hohmann, Ch. Kaps</i> | 137 |
| Life Cycle Analysis Incorporated Development of Geopolymer Binder - Explained in the Special Example: Acid Resistant Coating <i>A. Buchwald, M. Weil, K. Dombrowski</i> | 149 |
| Anti-Filtration Screens Based on Alkali-Activated Slag Binders <i>J. Deja, W. Brylicki, J. Matolepszy</i> | 163 |
| Concrete Based on Fly Ash Geopolymers <i>Josef Doležal, František Škvára, Pavel Svoboda, Rostislav Šulc, Lubomír Kopecký, Simona Pavlasová, Lenka Myšková, Martin Lucuk Kamil Dvořáček</i> | 185 |
| Comparing Investigations on Different Building Material Systems Including Alkali-Activated Materials <i>K. Dombrowski, E. Holt, A. Buchwald, M. Weil, P. Räsänen, J. Sachl</i> | 199 |
| The pH and Conductivity Study of Alkali Activated Slags Suspensions <i>Lucie Drongová, Václava Tomková</i> | 215 |
| Ceramic Industry Materials as Potential Alkaline Binders <i>A. Fernández-Jiménez, M. Monzó, M. Vicent, A. Barba, A. Palomo</i> | 217 |
| Alkaline Pozzolanic Cements <i>Vladimir Gotc, Ekaterina Pushkarova, Oleg Petropavlovskii, Sergey Timoshenko</i> | 237 |
| Hydration Mechanisms of Alkali-Activated Slag <i>A. Gruskovnjak, B. Lothenbach, L. Holzer, R. Figi, Winnefeld F. Empa</i> | 253 |
| The Resistive Composite Materials Based on Alkaline Binders in the System "Na ₂ O – CaO - SiO ₂ – FeSi - H ₂ O" <i>Sergiy Guziy</i> | 255 |

| | |
|---|-----|
| Geopolymer Composites and Restoration of Baroque Terracotta Statue <i>T. Hanzlíček, M. Steinerová, P. Straka, I. Perná</i> | 267 |
| Pozzolanic Properties of Fluidized Bed Ashes <i>T. Hanzlíček, I. Perná, M. Steinerová, P. Straka</i> | 271 |
| Influence of Metakaolin on Slag-Based Geopolymeric Binder <i>Fongjan Jirasit, Claus H. Rüschler, Ludger Lohaus</i> | 285 |
| Alkaline Cements and Concretes: Economical, Ecological and Legislative Aspects <i>Elena Kavalerova</i> | 293 |
| The Influence of Alkali Activator on the Hydration of Blast Furnace Slag <i>Miroslav Komljenovic, Darko Krizan</i> | 303 |
| Alkaline Cements, Concretes and Structures: 50 Years of Theory and Practice <i>Pavel Krivenko</i> | 313 |
| Fire-Resistant Alkaline Portland Cements and Concretes <i>Pavel Krivenko, Sergiy Guziy</i> | 333 |
| Fly Ash Based Alkaline Cements <i>P. Krivenko, G. Kovalchuk</i> | 349 |
| Directing the Hydration/Dehydration Structure Formation of Alkaline Portland Cement: A Perspective Way for Obtaining a High Temperature Concrete <i>Pavel Krivenko, Oleksandr Kovalchuk, Georgiy Kovalchuk</i> | 369 |
| Processes of Physico-Chemical Structure Formation in Modified Geocements <i>Pavel Krivenko, Mykola Mokhort</i> | 379 |
| Geocement Glues and Composite Materials: Practical Application <i>Pavel Krivenko, Mykola Mokhort, Oleg Petropavlovskii, Grigorii Vozniuk</i> | 397 |

| | |
|--|-----|
| Alkaline Portland Cements with High Volumes of Products of Man-Made and Natural Origin <i>Pavel Krivenko, Oleg Petropavlovskii, Aleksandr Gelevera</i> | 413 |
| Novel Geopolymeric Building Materials through Synergistic Utilisation of Industrial Waste <i>Sanjay Kumar, Rakesh Kumar, A. Bandopadhyay, S.P. Mehrotra</i> | 429 |
| Compromise Optimisation of Slag Alkaline Binders with Computational Materials Science Methods <i>T. Lyashenko, V. Voznesensky</i> | 447 |
| Leachability of Brown Coal Fly Ash Geopolymer <i>Martina Minaříková, Tomáš Vojta, František Škvára</i> | 459 |
| Experience of Application of Geocement Glues for Manufacturing of Fire-Protective Lifts <i>Mykola Mokhort, Oleg Petropavlovskii, Victor Labunskii</i> | 461 |
| Geocement Materials for Safety Disposal of Hazardous, Toxic and Radioactive Wastes <i>Mykola Mokhort, Josef Süssmilch, Grigorii Vozniuk</i> | 469 |
| Experience of Application of Geocements for Manufacturing of Inorganic Basalt and Organic-Mineral Jute Composites <i>Mykola Mokhort, Yurii Tsibulya</i> | 483 |
| Rheological Behaviour of Alkali-Activated Slag Pastes and Mortars <i>M. Palacios, P.F.G. Banfill, F. Puertas</i> | 493 |
| Nature of Alkali Aluminosilicate Polymers; A ²⁹ Si MAS-NMR Approach <i>A. Palomo, A. Fernández-Jiménez</i> | 509 |
| High-Temperature Properties of Geopolymer Materials <i>Simona Pawlasová, František Škvára</i> | 523 |

| | |
|---|-----|
| Influence of the Cement Substance Composition on the Concrete Crack Resistance Characteristics <i>S.Y. Solodkyy, R.V. Gayvanovych, R.M. Rusyn</i> | 637 |
| Properties of Alkali Activated Materials Suitable for Normalized Tests <i>P. Straka, T. Hanzlíček, I. Perná, M. Steinerová</i> | 653 |
| Pop Concrete® Volume Change Determination Influenced by Aging, Temperature and Moisture Variation <i>Tomáš Strnad, Pavel Svoboda</i> | 659 |
| Alkali Activated Material – Geopolymer <i>František Škvára</i> | 661 |
| Elastic properties of alkaline activated fly ash: results from nanoindentation and micromechanical modeling <i>Vít Šmilauer, Jiří Němeček</i> | 677 |
| Preparation of Popbeton® without Heating with Usage of „Intenzifikátor“ of Alkaline Activation <i>Rostislav Šulc, Pavel Svoboda</i> | 689 |
| The Potential Utilization of Slags from the Secondary Metallurgy <i>Václava Tomková, Jan Melecký, Lucie Drongová, Jozef Víček</i> | 691 |
| Tungsten Mine Waste Geopolymeric Binder Versus Ordinary Portland Cement Based Concrete. Abrasion and Acid Resistance <i>Fernando Pacheco Torgal, J. P. Castro-Gomes, Said Jalali</i> | 693 |
| Unburning Alkaline Binders and Heat-Insulating Materials on Base of Raw of Central Asia Region <i>A.A. Tulaganov, Kh.Kh. Kamilov, M.K. Hasanova, P.V. Krivenko, H.B. Fischer, S.S. Kasimova, N.B. Khodzhaev, D.K. Tulaganov, Sh.Kh.Kamilov</i> | 703 |
| Alkaline Binders for Refractory Concretes on the Basis of Soluble Silicates and Aluminates of Sodium <i>A.N. Yefremov</i> | 717 |

