

Inhalt

Grußworte	38
Keynotes	37
The Role of Hydrocarbon Exploration in a World of Growing Energy Demand Martin Fleckenstein	38
Mineral System Approach to Mineral Exploration Steffen Hagemann.....	39
Near-surface seismic: More than a problem of scale Richard D. Miller.....	40
New exploration paradigms for gold in West Africa Laurence Robb	41
Ist Erdwärme ein GeoRohstoff? Nein – viel besser! Ladislaus Rybach	42
Wie kritisch sind «kritische mineralische Rohstoffe» wirklich ? Leopold Weber	43
Öffentlicher Abendvortrag Rohstoffe für unsere Zukunftsfähigkeit Volker Steinbach	44
Natürliche Ressourcen für die Technologien der Zukunft / Natural resources for technologies of the future	
Mineralische Rohstoffe / Mineral resources	44
M1: Mineral resources for high tech and green technologies	45
The mobility of Gold and Molybdenum in volatile-bearing magmas Roman E. Botcharnikov, Francois Holtz, Robert L. Linnen, Max Wilke.....	47
Noble metals and selected trace elements of the Kupferschiefer-type mineralization of the former Mansfeld District Marco Fiedler, Gregor Borg.....	48
Representative sampling of dump material with Kupferschiefer-type mineralization of the former Mansfeld District (Germany). Marco Fiedler, Philipp Romm Steffen Raßler	49
„Kallilite“, an omitted Ni-Bi-Sb sulphide: preliminary mineral chemistry, paragenesis and formation conditions André Hellmann.....	50
In-situ weathering of low-grade Kupferschiefer ore dumps, Mansfeld mining district, Germany Andreas Kamradt, Nadine Liebetrau	51
Exploration methods for the prospection of metals in fine-grained tailings of the former Pb-Zn mine Maubacher Bleiberg, Germany Kerstin Kuhn , Dieter Rammlmair, Jeannet Meima.....	52
Charakterisierung von Lamprophyren und Karbonatiten im Nordteil des Delitzsch-Komplexes (Sachsen-Anhalt) Christian Marien, Marco Fiedler, Bodo Ehling, Bianca Uhde, Gregor Borg	53
Siderophore-promoted Pt-mobilization in oxidised PGE ores from the Great Dyke, Zimbabwe Dennis Mohwinkel, Michael Bau	54

Rare Earth Element Potential of the Fluorite deposit Vergenoeg, South Africa Caroline Mühlbach, Torsten Graupner, Ulrich Schwarz-Schampera, Friedhelm Henjes Kunst, Frank Melcher, Hennie Terblanche.....	55
Geology and Exploration of the Li-Sn-W-Rb-Cs-deposit Zinnwald, eastern Erzgebirge, Germany Jörg Neßler, Thomas Seifert, Jens Gutzmer, Armin Müller, Torsten Bachmann, Kersten Kühn.....	56
SEM-based mineral liberation analysis as a tool for the evaluation of ore comminution processes Bernhard Schulz, Oleg Popov, Dirk Sandmann, Sabine Haser, Jens Gutzmer.....	57
LA-ICP-MS analysis of critical electronic metals in sphalerite – evaluation of methods and application to Pb-Zn deposits and ore processing wastes in the district of Aachen Sven Sindern, Franz Michael Meyer, Lars Gronen, Simon Bohle, Marc Lehmacher, Georg Roth, Lars Peters, Michael Burchard Jens Schneider.....	58
Progress in understanding metallogenesis from the geochemistry of tourmaline in magmatic and hydrothermal ore deposits Robert B. Trumbull	59
Trace element distribution between cumulus minerals in the Upper Critical Zone of the Bushveld Complex, South Africa Ilya V. Veksler, Peter Dulski, David L. Reid, Jakob Keiding, Robert B. Trumbull	60
M2: Marine mineral resources	61
Effects of volcanic activity on hydrothermal venting in the eastern Manus Basin, Papua New Guinea Wolfgang Bach, Niels Jöns, Sven Petersen, Janis Thal, Eoghan Reeves, Jeff Seewald, Maurice Tivey, Dana Yoerger.....	62
Metallurgical Processing of Marine Mineral Resources – A Special Focus on Strategic Metals B. Friedrich, A. Pophanken.....	63
The petrogenesis of sulfide-hosting mid-ocean ridge basalts on the southern Central Indian Ridge Katja Heeschen, Henrike Franke, Ulrich Schwarz-Schampera	64
Deep Sea Mining concept for manganese nodules Steffen Knodt, Torsten Kleinen.....	65
High-tech metals in marine ferromanganese nodules and crusts: concentrations, phase associations and potential methods of selective extraction Charlotte Kleint, Andrea Koschinsky	66
The Chatham Rise phosphorites of New Zealand – Ressources and exploration activities Hermann Kudrass, Robin Falconer	67
Auswertungsmethoden von Korngrößenverteilungen zur Abschätzung von mineralischen Rohstoffvorkommen und Baugrundverhältnissen im deutschen Nordseeraum Michael Naumann	68
Hydrothermal Activity and Massive Sulfides in the equatorial South Atlantic Sven Petersen	69
Mineralogy of ferromanganese nodules and the metal association Anna Wegerzewski, Thomas Kuhn.....	70
M3: Mineral systems analysis – recent advances and applications in exploration	71
Age and Genesis of Greisen Mineralization in the Li-Sn(-W) Deposit Zinnwald, Eastern Erzgebirge, Germany Petya Atanasova, Jens Gutzmer, Thomas Seifert, Jörg Pfänder.....	72
Opaque Minerals of Albania Aleksander Ćina.....	73
Mapping of deuteric alteration and mineralisation critical for the geometallurgy of the Uitkomst Complex, Mpumalanga Province, South Africa Christian Günther, Christoph Gauert	74

Application of rapid X-ray diffraction (XRD) for exploration, mineral quantification and grade control of ores Uwe König	75
Potential modeling – Weights of evidence or logistic regression? Svetlana Arkhipova, Helmut Schaeben, K. Gerald van den Boogaart.....	76
M4: Geomicrobiology and biohydrometallurgy	77
Mikroorganisms in Pacific Ocean manganese nodules Marco Blöthe, Axel Schippers	78
Biogeometalurgical characterization of ore deposits – a new approach for sustainability in mining Bernhard Dold, Leyla Weibel	79
In situ bioremediation of a heavily contaminated soil in a copper deposit Stoyan Groudev, Plamen Georgiev, Irena Spasova, Marina Nicolova	80
Microbe-mineral interaction in an extreme arid and high saline mine tailings environment in northern Chile H. Korehi, M. Blöthe, M.A. Sitnikova, D. Kock, B. Dold, A. Schippers	81
Copper winning by bioleaching of chalcopyrite with mesophilic, moderate thermophilic and extreme thermophilic microorganisms Beate Krok, Axel Schippers, Wolfgang Sand	82
Feldexperimente zur Phytoremediation an einem urankontaminierten Standort und anschließende Verwertung des Pflanzenmaterials D. Mirgorodsky, D. Ollivier, L. Jablonski, D. Merten, S. Willscher, J. Wittig, G. Büchel, P. Werner	83
The potential and limitation of genome analysis in geomicrobiology and geobiotechnology Martin Mühlung, Sophie Mosler, Anja Poehlein, Sonja Voget, Rolf Daniel, Judith Kipry, Claudia Gniese, Sarah Hofmann, Susan Ehinger, Michael Schlömann.....	84
Advanced biotechnology for extraction and recovery of metals Johannes Raff, Falk Lehmann, Henry Moll, Sabine Kutschke, Katrin Pollmann	85
Biomining – development of metal recovery with microorganisms in the mining industry Axel Schippers, Jürgen Vasters, Malte Drobe.....	86
New insights into the biofilm lifestyle and metabolism of <i>Acidithiobacillus</i> species from analysis of high throughput proteomic data Mario Vera, Claudia Janosch, Sören Bellenberg, Beate Krok, Wolfgang Sand, Ansgar Poetsch.....	87
Biogeochemische Untersuchungen zur Ursache erhöhter NH ₄ -Konzentrationen im Grundwasser von Tagebau-Kippenbereichen des ehemaligen Braunkohletagebaus S. Willscher, D. Knippert, D. Kühn, H. Ihling	88
M5: Certification of geological materials – Schemes and methods.....	89
The chemistry of uraninite as possible forensic tool for provenance analysis Hartwig E. Frimmel, Sibylle Schedel, Helene Brätz	90
Fingerprinting of cassiterite Simon Goldmann, Frank Melcher, Hans-Eike Gäbler	91
Mineral identification by EDXRF-microscopy: Example Coltan Dieter Rammlmair, Jeannet Meima, Maria Sitnikova, Frank Melcher.....	92
Application of machine learning to distinguish Coltan ores from Central Africa Gerd Rantitsch, Christian Savu-Krohn, Frank Melcher, Torsten Graupner, Eike Gäbler.....	93
M6: Industriemineral, Natursteine, Steine und Erden	94
Graphit – ein Rohstoff mit glänzender Perspektive Christoph Frey, Fiona Reiser	95
How to explore the different Diamond Deposits properly and economically Reiner Homrighausen	96

Luftbildgestütztes Abgrabungsmonitoring unterstützt Raumplanung Annette Kips, Ingo Schäfer, Marion Schwab, Volker Wrede.....	97
Bewertung von Steine- und Erden-Rohstoffen – die sächsische Lösung Katrin Kleeberg, Jochen Rascher.....	98
Überschussminerale – Massenabfälle oder Zukunftsrohstoffe? Lutz Krakow	99
Rohstoffe und Rohstoffsicherung in Niedersachsen Alfred Langer.....	101
Neue Rohstoffkarte schafft Transparenz für die Rohstoffvorsorge Nicole Martini, Ingo Schäfer, Markus Stüber-Delhey, Volker Wrede	102
Geologische und mineralogische Aspekte von Tripel und Kieselerden in Deutschland Agnes Mitterer, Gerhard Lehrberger, Stefanie Füssl	103
Quarz – Rohstoff des 21. Jahrhunderts : Quarzkies-Erkundung in Niederbayern Klaus Poschlod, Max Schmid	104
The rush is on – The Recent Global Potash Exploration Boom: Exploration Targets and Production Potentials Henry Rauche.....	105
Phosphatrohstoffe – Globale Verteilung und Verfügbarkeit Simone Röhling	106
Die Kaliindustrie in der Region Hannover: Ein Überblick aus Lagerstättensicht Rainer Stax.....	107
Angewandte Rohstoffsicherung in Südwestdeutschland Jens Wittenbrink, Wolfgang Werner	108
M7: Strategien der Rohstoffsicherung durch Rohstoffeffizienzmaßnahmen Strategies for securing mineral raw materials supply by raw material efficiency gains?	109
Empirische Analyse von preis- und verfügbarkeitsbeeinflussenden Indikatoren unter Berücksichtigung der Kritikalität von Rohstoffen Benjamin Achzet	110
Der IW-Rohstoff-Risiko-Index als Instrument zur Risikomessung Hubertus Bardt, Hanno Kempermann.....	111
Managing Strategic and Operational Risk using an Integrated Mine Modelling Approach Mike Buxton, Joerg Benndorf.....	112
Rohstoffrisikobewertung – Indikatoren für Preis- und Lieferrisiken bei der Rohstoffversorgung Deutschlands Ulrike Dorner, Maren Liedtke	113
Measuring criticality of mineral raw materials - an empirical approach creating a quantitative commodity criticality index Benedikt Gleich, Herbert Mayer, Andreas Rathgeber	114
Automated Detection, Classification and Real-Time Reporting of Platinum Group Minerals with a scanning electron microscope Eddy Hill, Michael Hiltl, Champ Gohil	115
Paradigmenwechsel an den Rohstoffmärkten – eine ökonomische Betrachtung aus Sicht eines Investors Ralf Müller-Rehbehn, Torsten Dennin.....	116
Nutzungspotenzial von Talsperrensedimenten in Deutschland Martin Schmitz, Sebastian Henkel, Elena Pummer, Holger Schüttrumpf, Peter Buchholz.....	117
Do Fundamental Factors Drive the Price of Scarce High-Tech Metals? – An Event Study Markus Wanner, Benedikt Gleich, Andreas Rathgeber.....	118

Was sind wirtschaftsstrategische Rohstoffe?	
Friedrich-W. Wellmer.....	120
Molecular Sorting Technologies	
Joerg Woidasky	121
M8/9: Historische Bergbauzeugen und Potentiale für eine postmontane Nutzung – From mining to geosites .	122
Softwareentwicklung für das Geothermieportal des Landes Brandenburg	
Jörg Donat, Thomas Mathews, Till Singhal-Bohrmann,	123
Potentiale und Grenzen der postmontanen Nutzung von ehemaligen Bergbauliegenschaften im Bereich der sächsisch-thüringischen Uranprovinz	
Stefan Mann, Michael Paul.....	125
Nationaler GeoPark Ruhrgebiet – Vom montanindustriellen Herzen Europas zum Welterbe «Industrielle Kulturlandschaft Ruhrgebiet»	
V. Mügge-Bartolović, J. Linke, U. Mehrfeld, M. Pfeiffer, V. Wrede	126
10 Jahre Geopark Harz . Braunschweiger Land . Ostfalen – Landschaft, Menschen und Ressourcen	
Henning Zellmer.....	127
M10: Raw materials: Material flow analysis and life cycle assessment	129
Bewertung von Ressourceneffizienzpotenzialen von Forschungsprojekten am Beispiel des BMBF-Förderschwerpunkts	
Christian Peter Brandstetter, Frederik Trippe, Stefan Albrecht, Magnus Fröhling, Klaus Sedlbauer, Frank Schultmann	130
The REE-bearing heavy mineral placers of the Domsen Sands, “Profen lignite mine” near Leipzig (Germany)	
Raik Döbelt, Sabine Walther, Gregor Borg, Klaus Stedingk, Thomas Fischkandl.....	132
Der österreichische Phosphorhaushalt	
Lukas Egle, Simon Thaler, Matthias Zessner, Helmut Rechberger	133
Ökobilanzielle Betrachtung von Seltenen Erden	
Roberta Graf, Michael Held, Peter Brandstetter, Stefan Albrecht	135
Nicht-erneuerbare abiotische Ressourcen in der Ökobilanzierung: eine kritische Auseinandersetzung	
Michael Hiete.....	136
Material Flows of Cadmium in the European Society	
Robert Ilg, Michael Held, Peter Brandstetter, Stefan Albrecht.....	137
Geo-Energie / Geo-Energy	138
G2: Beyond tradition – unconventional gas and oil from shale	139
Assessing unconventional prospects – How important is migration?	
Ulrich Berner	140
New insights on the maturity distribution and shale gas potential of the Lower Saxony Basin, NW-Germany	
Benjamin Bruns, Rolando di Primio, Ulrich Berner, Ralf Littke	141
Organic geochemistry: The key to shale resource systems as illustrated by the Palaeozoic of the Podlasie-Lublin basin (Poland)	
Axel Emmerich, Hartmut Jäger	142
Comments on the isotopic reversal (“rollover”) in shale gases	
Eckhard Faber	143
BGR – USGS assessment of selected source rock systems in Germany	
Donald Gautier.....	144

High-Resolution LWD Images Used to Optimize Completions in Unconventional Play – North America Sandeep Janwadkar, Mark Thomas, Andreas Hartmann, Steven Rogers	145
Potentially leachable Cr(VI) in Jordanian spent oil shale produced by aerobic combustion and anaerobic pyrolysis Michael Kersten	146
Petroleum and natural gas form shale – Initial assessment of the gas in place in Germany Stefan Ladage and Team of BGR's NIKO Project	147
Defining the Core of Shale Plays – Lessons from Cutting-Edge Academic Work and Practical Experience Neil McMahon, PhD, Marlan Downey, Alexander Inkster, CFA	148
Using stable isotope geochemistry to identify sources of fugitive gas at shale gas wells: Lessons from Western Canada Karlis Muehlenbachs, Martin Schoell.....	149
Thermal maturity of aquatic and terrestrial organic matter in organic-rich sediments from $\delta^{13}\text{C}$ ratios of light hydrocarbons Martin Niemann, Ulrich Berner	150
Experimental Investigation of High Pressure Methane sorption on Lower Jurassic Posidonia Shale sample, NW Germany Srikumar Roy, Matus Gasparik, B.M Krooss	151
Mudgas Isotope Interpretations for Assessment of Paleozoic Shales in Poland Martin Schoell , Ulrich Bieg, Manfred Schmitt, Anke Jurisch, Boris Nadolny	152
Shale gas characteristics of the Lower Toarcian Posidonia Shale in Germany: from basin to nanometre scale Hans-Martin Schulz, Sylvain Bernard, Brian Horsfield, Martin Krüger, Ralf Littke, Rolando di Primio .	153
Basic approach to estimate subsidence and effective palaeo-heat flow of sediment basins using maturity data – Evaluation of regions with potential unconventional plays in NW Germany and the Rhine Valley Graben Eva Stiller, Ulrich Berner.....	154
Lab Study and NMR Measurements of Hydrocarbons in Unconventional Reservoirs Holger Thern, Jin-Hong Chen, Jilin Zhang.....	155
Can Isotopic Trends of North American Shale Gases be Extrapolated to European Basins? Barbara Tilley, Karlis Muehlenbachs.....	156
G3: Coal & coalbed methane	157
CO ₂ -ECBM: Application of laboratory results to reservoirs Yves Gensterblum, Alexej Merkel, Michael Sartorius, Andreas Busch, Bernd M. Krooss	158
CO ₂ -ECBM related coupled physical and mechanical transport processes Yves Gensterblum, Alexej Merkel, Michael Sartorius, Andreas Busch, Bernd M. Krooss	159
Cleaner and more efficient coal utilisation driven by automated quantification of included and excluded minerals Michael Hiltl, Eddy Hill, Champ Gohil.....	160
The long way towards of a new coal mine in the high arctic: the Lunckefjell-project in Svalbard Malte Jochmann	161
Braunkohlegewinnung und -nutzung im Rheinischen Revier Lars Kulik	162
Economic Assessment of a Potential UCG-CCGT-CCS Start-up Scenario for the Dobrudzha Coal Deposit Natalie Nakaten, Thomas Kempka, Michael Green, Ralph Schlüter, Dimitar Merachev, Anna Preshelkova, Rafiq Azzam.....	163

Coking coals from SW part of the Upper Silesian Coal Basin (Poland) Krystian Probierz, Marek Marcisz.....	164
Coal mining developments in Mozambique, Botswana and Zimbabwe Christian Sommer , Sandro Schmidt , Arne K. Bayer	165
Unkonventionelle Erdgasvorkommen in NRW- Potenziale und Risiken aus geowissenschaftlicher Sicht Volker Wrede.....	166
G4: Moore und die Bedeutung des Rohstoffs Torf in Deutschland	167
Handlungsempfehlungen zur Wiedervernässung von Torfabbauflächen Joachim Blankenburg.....	168
Die Zukunft der deutschen Torfindustrie im Umfeld von Natur- und Klimaschutz Gerfried Caspers	169
Zulassungsverfahren für den Abbau von Torf in Niedersachsen Jürgen Cassier	170
Klinische Erfahrungen mit der Torftherapie bei rheumatischen Erkrankungen Shaban Fetaj.....	171
400 Jahre intensive Moornutzung und Torfverwendung im Nordwesten Deutschlands – vom Brenntorf zum Kultursubstrat Jürgen Günther	172
Neue Abbauflächen - Perspektiven für die Torfindustrie in Niedersachsen Bernd Hofer	173
Naturschutz und Torfabbau – Nationale und Internationale Entwicklungen am Beispiel des Niedersächsi- schen Moorschutzprogrammes und der Strategy for Responsible Peatland Management. Silke Kumar	174
Torfabbau nach Bundesbergrecht, dargestellt am Beispiel des Bundeslandes Mecklenburg-Vorpommern Axel Precker.....	175
Peat – Properties and availability help sustain EU horticulture Gerald K. Schmielewski	176
Wirtschaftliche Bedeutung von Torf für Deutschland Johannes Welsch	177
G5: Geological CO₂ storage – capacities, integrity of the storage complex, uncertainties.....	178
Integrity of sealing rock formations for CO ₂ storage – The CO ₂ SEALS project Alexandra Amann, Pieter Bertier, Jennifer Blume, Andreas Busch, Christoph Clauser, Jörg-Detlef Eckhardt, Bernhard M. Krooss, Ralf Littke, Thomas Mutschler, Thomas Neumann, Ines Rick, Helge Stanjek, Heinz-Günter Stosch, Philipp Weniger	179
CO ₂ BioPerm – How do biogeochemical processes affect the long-term permeability behaviour of reservoir and cap rocks? Claudia Gniese, Carsten Freese, Nils Hoth, Andrea Kassahun, Martin Mühling, Michael Schlömann....	180
Analysing the near-surface salinisation processes from field investigations and 3D modeling at a potential CO ₂ storage site, Eastern Brandenburg (Germany) Christoph Jahnke, Silvio Janetz, Ricarda Endler Elena Tillner, Thomas Kempka	181
The Longyearbyen CO ₂ lab at Svalbard in the high arctic: developing a CCS test site in an unconventional reservoir Malte Jochmann, Snorre Olaussen	182
OpenGeoSys: An open source project for numerical simulation of THMC processes Norbert Böttcher, Thomas Kalbacher, Olaf Kolditz, Sebastian Bauer, Haibing Shao, Lars Bilke, Jens O. Delfs, Thomas Fischer, Uwe J. Görke, Karsten Rink, Ashok K. Singh, Joshua Taron, Marc Walther, Wenqing Wang, Norihiro Watanabe	183

Storage potential of the German North Sea sector Dirk Kaufmann, Anke Bebiolka, Fabian Jähne, Christian Müller.....	184
Prediction of reservoir pressure and CO ₂ plume migration at the Ketzin pilot site Thomas Kempka, Elena Tillner, Benjamin Nakaten, Michael Kühn.....	185
Quantification of long term mineral trapping by siderite and dolomite for different porosity and water saturation scenarios at the Ketzin pilot site for CO ₂ storage Elisa Klein, Marco De Lucia, Thomas Kempka, Michael Kühn	186
Unterschiedliche Wechselwirkungen beim Kontakt zwischen CO ₂ -Fluiden: Vergleich zwischen Modellierung und Laborexperiment am Beispiel eines Rotliegend-Sandsteins Christof Lempp, Herbert Pöllmann, Herwig Marbler	187
CCS: Changes of petrophysical properties of sandstones due to interaction with supercritical carbon dioxide Georg Nover, Jutta von der Gönna, Stephanie Heikamp, Jens Köster	188
Continuation of high-resolution isotope measurements of injection and reservoir wells at the Ketzin site (Germany) Martin Nowak, Robert van Geldern, Anssi Myrtinyinen, Veith Becker, Martin Zimmer , Johannes Barth... 189	
A New Borehole Simulator for Full Scale In-Situ Well Cementing Experiments Under Elevated p-T-Conditions Frank R. Schilling, Steffen Klumbach, Michael Haist, Marco Kromer, Astrid Hirsch, Andreas Bieberstein, Thomas Mutschler, Thomas Neumann, Alexander Scheuermann	190
CO ₂ CARE – Site Closure Assessment Research – overview & newest results M. Wipki, M. Kühn, S. Durucan, J.-P. Deflandre , S. Lüth, J. Wollenweber, A. Chadwick, G. Böhm	191
G6: Tiefe Geothermie – geologische Strukturen für die Energiegewinnung	192
3D-Modelle geothermisch nutzbarer Strukturen in GeotIS Thorsten Agemar, Rüdiger Schulz	193
Fazies- und strukturdifferenzierte Reservoirmodelle als geothermische Explorationsgrundlage Franz Böhm, Ulrich Steiner, Alexandros Savvatis, Michael Schneider	194
Die Modellierung hydrogeochemischer Prozesse bei der geothermischen Nutzung von Formationswässern Elke Bozau, Wolfgang van Berk	195
Control of geological structures on the thermal field of a geothermal site (Groß Schönebeck, NE-German Basin): Results from 3D numerical simulations Yvonne Cherubini, Mauro Cacace, Magdalena Scheck-Wenderoth, Inga Moeck, Björn Lewerenz.....	196
Massive Halitausfällungen bei der Rückförderung aus dem mittleren Buntsandstein der Bohrung Groß Buchholz Gt1 (GeneSys-Projekt Hannover) Annalena Hesshaus, Georg Houben, Robert Kringel	197
Structural controls on thermal regimes within the Northeast German Basin - Results from 3D numerical modelling Björn Onno Kaiser, Mauro Cacace, Magdalena Scheck-Wenderoth, Björn Lewerenz	198
Ermittlung der seismischen Gefährdung beim Ausbau und Betrieb von EGS-Anlagen J. Kopera, W. Morales-Avilés, J. Schlittenhardt, T. Spies	199
Von der Vorhersage zur geothermischen Projektumsetzung – Kirchweidach, Bayerisches Molassebecken, ein Projektbeispiel für die erfolgreiche geothermische Feldesentwicklung mittels Seismic-to-Simulation-Software PETREL und ELCIPSE Lars Matthes, Martin Neudecker	200
Tiefengeothermie im Oberrheingraben: Soultz-sous-Forêts und Bruchsal Bernd Melchert, Julia Scheiber ² , Albert Genter ² , Lena Eggeling, Thomas Kölbel, Torsten Tischner.....	201

Charakterisierung potentieller Nutzhorizonte zur geothermischen Energiegewinnung am Standort der Bohrung Groß Buchholz Gt1 (GeneSys-Projekt Hannover) Judith Orilski, Wiete Hübner, Thomas Wonik, Projektgruppe GeneSys	202
Fracoperation und hydraulische Tests in der Bohrung Groß Buchholz Gt 1 (GeneSys-Projekt Hannover) Evelin Pechan, Torsten Tischner, Stefanie Krug, Reiner Jatho.....	203
Bruchausbreitung und Stimulation von Sedimentgesteinen im Nordwestdeutschen Becken Dorothea Reyer, Sonja L. Philipp	204
Geothermal Resources of the Upper Rhine Graben – Geological and temperature modeling in the GeORG project Isabel Rupf, Charlotte Fehn, Gunther Wirsing, Thomas Kärcher & GeORG Project Team	205
Geothermisches 3-D-Modell des Ruhrgebiets Ingo Schäfer	206
Conductive versus convective heat transport in sedimentary basins Magdalena Scheck-Wenderoth, Mauro Cacace, Yuriy Maystrenko, Björn Onno Kaiser, Vera Noack, Yvonne Cherubini	207
Untersuchung eines Störungssystems im Kristallin des Westerzgebirges durch 3D-seismische Messungen für eine geothermische Nutzung Hartwig von Hartmann, Ewald Lüschen, Rüdiger Thomas, Rüdiger Schulz	208
Geothermische Tiefenwässer im Norddeutschen Becken Markus Wolfgramm	209
G7: Oberflächennahe Geothermie – Umweltschonende Gebäudeklimatisierung mit Erdwärme	210
Die Versorgung eines Neubaugebietes mit “Kalter Nahwärme” Florian Dönges, Thomas Kölbel	211
Oberflächennahe Geothermie in Deutschland – derzeitige Nutzung und Potenziale Rüdiger Grimm	212
Erfahrungen und erste geologische Ergebnisse aus dem Projekt »Mitteltiefe Erdwärmesonde Heubach« (Böllsteiner Odenwald) Anne Kött, Johann-Gerhard Fritzsche, Dieter Nesbor, Thomas Reischmann	213
Qualitätsanforderungen und Qualitätsmanagement bei der Erschließung von geothermischen Feldern Clemens Lehr	214
Ergebnisse aus Feldmessungen zur Effizienzbewertung von elektrisch angetriebenen Kompressionswärmepumpen Marek Miara	215
Das Geothermieprojekt der Stadtwerke Osnabrück Dieter Michalzik, Kirsten Fromme, Jens Steffahn, Hans-Herbert Achilles, Christoph Schockemöhle	216
Mini logging probes to apply in small diameter shallow geothermal heat exchangers – state of the art Achim Rübel, Jurgis Klaudius, Stephan Peters.....	217
„Wenn die Geologie nicht stimmt“ – Unerwartete Auswirkungen oberflächennaher Erdwärmennutzung Ingo Schäfer, Volker Wrede	218
G8: Reservoir rocks: New approaches for evaluation of processes in the pore space.....	219
Understanding the deposition behavior of colloids at mineral and rock surfaces as a function of surface roughness and topography Gopala Krishna Darbha, Cornelius Fischer, Johannes Lützenkirchen, Thorsten Schäfer	220
Toarcian shales in Western Mecklenburg, Germany: Preliminary 3D reconstruction of mineralogy, geochemistry, and pore space Georg Grathoff, Karsten Obst.....	221

Illite morphologies under microscopic resolution – The possible relationship between illite morphologies and pore geometries Nadine John, Andreas Bauer, Reinhard Gaupp.....	222
Quantifying long-term carbonate mobilisation in a limestone aquifer Jens Kirstein, Reinhard Gaupp	223
Parametrization of reservoir quality classes and a new geometric model for the determination of pore-mineral interfaces in Rotliegend sandstones of central Germany Bernd Kohlhepp, Reinhard Gaupp.....	224
Small-scale heterogeneities of sandstones and their effect on reservoir properties - examples from the Upper Triassic Stuttgart Formation, well Ketzin, Germany Robert Schöner, Mario Kittel, Stefan Krumm, Tobias Fey.....	225
Building and Applying Rock Models using Well Logging and Geological Data Holger Thern, Guodong Jin	226
The determination of mineral surface areas in Rotliegend sandstones and integration in geochemical modelling of CO ₂ -water-rock interactions Svenja Waldmann, Andreas Busch, Reinhard Gaupp, Kees van Ojik	227
Angewandte Geowissenschaften / Applied geosciences	228
A1: Applied geological remote sensing.....	229
The application of InSAR to monitor pumping induced-land subsidence and its relation with aquifer properties Nazemeh Ashrafianfar, Wolfgang Busch	230
Very High Resolution Photogrammetric DSMs and True-Orthoimages: Quantifying Surface Rupturing Earthquakes in Northern Chile Tilman Bucher, Olaf Zielke, Pia Victor, Frank Lehmann, Onno Onken.....	231
Geothermal Exploration using Airborne Thermal Survey over the Silali Geothermal Prospect, Kenya Andrea Friese, Joseph Mutua, Tito Lopeyok, Isaak Kanda, Marietta Mutonga, Friedrich Kühn, Norbert Ochmann.....	232
Anwendungen der Fernerkundung in der Geologie Cornelia Gläßer, Friedrich Kühn	233
Das Multisensorik-Airborne-Erkundungssystem der BTU Cottbus - Stand und Perspektiven Rainer Herd, Michael Lay.....	234
The potential of imaging spectroscopy and the future EnMAP mission for mineral exploration Hermann Kaufmann.....	235
Der Hebungsfall Staufen im Breisgau – eine Zeitreihenanalyse der Deformationserscheinungen basierend auf TerraSAR-X Daten Christin Lubitz, Mahdi Motagh	236
Application of Integrated Remote Sensing, Geological and Geochemical Analysis in the study of mineral alterations around gold deposits, Lake Victoria Gold Field, Tanzania Elisante Mshiu, Gregor Borg, Cornelia Gläßer.....	237
Mapping Ground Displacements on Wide Areas using Persistent Scatterer Interferometry Alessandro Parizzi, Nico Adam, Fernando Rodriguez Gonzalez, Werner Liebhart, Ramon Brcic, Xiao Ying Cong	238
BGR-Beiträge zu den GMES-Vorhaben Terra firma und PanGeo Corinna Wolf, Nico Adam, Kai Hahne, Friedrich Kühn, Uwe Schäffer.....	239

A2: Hydrogeophysik – neue Methoden	240
Hubschrauber-Elektromagnetik mit a-priori Informationen aus der Seismik für das hydrogeologische Modell der Nordseeinsel Föhr	
Thomas Burschil, Helga Wiederhold, Wolfgang Scheer, Reinhard Kirsch	241
Bestimmung der hydraulischen Leitfähigkeit von Lockersedimenten mit Hilfe der Nuklear-Magnetischen Resonanz	
Raphael Dlugosch, Mathias Ronczka, Thomas Günther, Mike Müller-Petke, Ugur Yaramanci.....	242
Complex Conductivity imaging for the characterization of contaminated aquifers and microbial processes associated with degradation of contaminants	
Adrián Flores Orozco, Kenneth H. Williams, Peter Dietrich, Carsten Leven, Andreas Kemna.....	243
Langzeitmonitoring des Salz-/Süßwasser-Übergangsbereichs auf Borkum mit vertikalen Elektrodenstrecken	
Michael Grinat, Wolfgang Südekum, Dieter Epping, Robert Meyer, Thomas Günther.....	244
Ableitung hydraulischer Parameter aus gemeinsamer Inversion von elektrischen und Magnetresonanz-Sondierungen am Beispiel der Nordseeinsel Borkum	
Thomas Günther, Mike Müller-Petke	245
Kombinierte Nutzung von hydraulischer Tomographie und Wärmetransportsimulation zur detaillierten Charakterisierung geothermischer Systeme	
Rui Hu, Phillip Oberdorfer, Ralf Brauchler, Linwei Hu, Ekkehard Holzbecher, Thomas Ptak, Martin Sauter	246
Quantitative integration of time-lapse geophysical data in hydrological models	
J.A. Huisman, M.B. Cho, J. Rings, J. Sorg, H. Vereecken	247
Erkundung sedimentärer Strukturen mittels geophysikalischer und Direct Push- gestützter Methoden als adaptives Verfahren zur Untergrundcharakterisierung	
Manuel Kreck, Thomas Vienken, Peter Dietrich, Jörg Hausmann, Ulrike Werban.....	248
Seismoelektromagnetische Effekte zur Charakterisierung von Grundwasserleitern	
Bernd Kröger & Andreas Kemna.....	249
Improving Terrestrial Water Flux Models: Challenges for Hydrogeophysical Observation, Data Handling and Information Utilization	
H. Paasche, U. Werban, T. Vienken, S. Zacharias, J. Tronicke, S. Attinger, P. Dietrich.....	250
A3: From tools to interpretation – modern methods in downhole logging and log interpretation for all kinds of georesources such as conventional or unconventional hydrocarbons, geothermal reservoirs, or groundwater	251
Stimulation und Rissausbreitung in der Bohrung Lindau 1	
Thomas Röckel, Torsten Tischner, Thomas Wonik.....	252
Real-time application of magnetic resonance logging-while-drilling	
Holger Tietjen, Holger Thern, Thomas Kruspe, Radu Coman	253
Estimation of Rock Mechanical Properties from Well Logs and Their Relevance for Geothermal Reservoirs	
Stefan Wessling, Philipp Tesch, Anne Bartetzko, Esther Vogt, Thomas Wonik, Jörg Renner, Torsten Tischner	254
A4: Quaternary geochronology	255
OSL Dating of Sediments	
Manfred Frechen, Sumiko Tsukamoto.....	256
Subfossile Bäume aus Nordwestdeutschen Mooren - ihre Bedeutung für den Aufbau ultralanger Jahrring-Chronologien sowie als klimarelevantes Archiv der Moorentwicklung	
Hanns Hubert Leuschner, Manfred Frechen , Inke Achterberg, Andreas Bauerochse, Gerfried Caspers ..	257

Entstehung der Quartären Terrassen am Vansee Martin Mager, Thomas Litt, Manfred Frechen, Sumiko Tsukamoto	258
OSL and IRSL dating of fluvial samples at Tiszasas (Hungary) Ágnes Novothny, Gyula Gábris, Manfred Frechen, Sumiko Tsukamoto, Astrid Techmer	259
Reconstructing Lake Level Changes of Tangra Yum Co Using Cosmogenic Be and OSL-Dating Eike F. Rades, Sumiko Tsukamoto, Manfred Frechen, Ralf Hetzel	260
Luminescence dating of the upper Senne complex (NW Germany): a high-resolution chronostratigraphic framework for alluvial fan and aeolian sandsheet systems Julia Roskosch, Sumiko Tsukamoto, Janine Meinsen, Manfred Frechen, Jutta Winsemann	261
Th/U investigation on the Holsteinian Interglacial at Wedel Melanie Sierralta, Brigitte Urban, Gerhard Linke, Manfred Frechen.....	262
OSL-dating of coastal chevron deposits and implications for tsunami hazard Michaeala Spiske, Anna-Marietta Garcia Garcia.....	263
Morphology and OSL-based geochronology of the Holocene coastal dunes fields of Naxos Island (Cyclades, Greece) Jessica Starke, Stéphane Cordier, Marie-Liane Schützler, Niki Evelpidou, Kosmas Pavlopoulos, Mélanie Bouchet, Sumiko Tsukamoto, Manfred Frechen	264
Towards developing a semi-automated measurement system for electron spin resonance (ESR) dating Sumiko Tsukamoto, Frank Oppermann	265
Time constraints for the Holocene coastal sediments of the German North Sea – examples for the sedimentological record representative for two coastal sections : the East Frisian barrier islands and the Jade Bay Wolfram Wartenberg, Friederike Bungenstock, Manfred Frechen, Holger Freund.....	266
OSL dating of the Garding core – a deep terrestrial archives in Northern Germany Jingran Zhang, Sumiko Tsukamoto, Alf Grube, Manfred Frechen.....	267
A5: Management and application of geoscience information.....	268
EMODnet: A Seabed Geology Data Infrastructure for the Northern-Europe Off-Shore Regions Kristine Asch, Alan Stevenson.....	269
Geopotenzial Deutsche Nordsee: „die interaktive Website“ Hans-Ulrich Bartsch, Paweł Gdaniec, Hans J. Heineke, Kristine Asch, Anja Steininger, Veronika Linke, Galina Beliakova.....	271
Semantische Datenmodelltransformation geologischer Daten des LGRB Baden-Württemberg ins INSPIRE-Datenmodell Andreas Hagemeister, Matthias Franz, Edgar Nitsch	272
AEGOS – African European Georesources Observation System - eine pan-afrikanische Dateninfrastruktur: Common strategies for capacity building and training programmes Markus Toloczyki	273
Geotope und Geocaching - eine kritische Betrachtung anhand der 100 schönsten Geotope in Bayern Andreas Ziemann, Florian Menschik, Silvia Beer, Gerhard Lehrberger, Georg Loth	274
The GeORG geoportal: Interoperable web distribution of harmonized geological data H. Zumsprekel, B. Anders, C. Fehn, E. Nitsch, I. Rupf, G. Sokol, G. Wirsing & GeORG Project Team..	275
Stratigraphische Tabelle von Deutschland Kompakt 2012 Deutsche Stratigraphische Kommission (DSK).....	276
A6: GIS und 3/4D-Modellierung in den Geowissenschaften	277
Geopotentials of the Upper Rhine Graben - results of the GeORG project B. Anders, C. Fehn, E. Nitsch, I. Rupf, G. Wirsing, H. Zumsprekel & GeORG Project Team.....	278

Geological structural model of the Federal state of Hesse (Germany) to evaluate geothermal potentials with consideration of parameter uncertainties Dirk Arndt, Kristian Bär, Ingo Sass, Andreas Hoppe	279
GIS-gestützte Modellierung von Bodenerosion durch Wasser – neue Ansätze zur Verbesserung von Bodenabtragsprognosen Jan Bug, Bastian Steinhoff, Thomas Mosimann.....	280
A 3D ArcGIS geological model of the eastern underground of Brussels: from Quaternary to the Palaeozoic basement Geoffrey Cambier, Xavier Devleeschouwer	281
Data management of seamless Geomodels via a webportal Paul Gabriel, Jan Gietzel, Le Hai Ha, Helmut Schaeben.....	282
Visuelle Unterstützung und Prüfung der Planung von Arbeiten in komplexen Strukturen durch Verknüpfung der Daten mit 2D- und 3D-Ansichten und Animationen Heller, M., Rietmann, M, Schwarz, R., R. Köster, J. Wollrath	283
Anatomy of a complex tunnel valley fill revealed from 3D subsurface modelling and shear wave seismics: the Pleistocene of Schöningen, Germany Jörg Lang, Jutta Winsemann, Dominik Steinmetz, Ulrich Polom, Lukas Pollok, Utz Böhner, Jordi Serangeli, Christian Brandes, Andrea Hampel, Stefan Winghart	284
An Object-Relational Spatio-Temporal Geoscience Datamodel Hai Ha Le, Paul Gabriel, Jan Gietzel, Helmut Schaeben.....	285
3D-modeling in a densely populated alluvial plain (Northern Upper Rhine Graben, Germany) Rouwen Lehné, Christian Hoselmann, Andreas Hoppe, Heiner Heggemann	286
3D modelling and GIS technologies in understanding and predicting anomalous ground conditions in London Katherine Royse.....	287
Geometrical 3D-modeling of the sedimentary strata of cuesta landscapes in southern Germany with an efficient multisource approach Isabel Rupf, Volker Armbruster, Markus Haas & ISONG Team	288
Detection of oil spills in the area of the Kirkuk Oil Field (Iraq) with hyper spectral satellite data, GIS-analysis and modeling Layth Y. Sahib, Rouwen Lehné, Christoph Schüth, Andreas Hoppe	289
Der tiefere Untergrund der deutschen Nordsee als 3D-Modell Carolin Schmidt, Katrin Lademann	290
Landesgrundwassermodelle – eine neue Herausforderung? Thomas Walter	291
Innovative Visualisierungsverfahren in der 3D-Geologie Peter Wycisk, Ronny Lähne, Wolfgang Gossel	292
A7: GEOTECHNOLOGIEN	293
Erkundung von Schwächezonen und Salzwasseraufstiegsregionen mit geoelektrischen und elektromagnetischen Verfahren im Umfeld eines potentiellen CO ₂ -Speicherstandorts – Projekt brine Rainer Herd, Wlad Schafrik.....	294
PRediction Of deformation To Ensure Carbon Traps – the joint project PROTECT Charlotte M. Krawczyk and PROTECT Research Group	295
Technology transfer of the GEOTECHNOLOGIEN program Ute Münch, Alexandra Scherer.....	296
Abdichtung von Bohrungen eines CO ₂ -Untergrundspeichers für deren langfristige, bergbausichere Verwahrung (CODICHT) im BMBF-Programm „GEOTECHNOLOGIEN“ Steffen Schmitz.....	297

Enhancing the quality of 3D subsurface models by integrating geophysical data sets Dominik Steinmetz, Jutta Winsemann, Peter Menzel, Angelika Ullmann, Bernhard Siemon, Christian Brandes, Hans-Jürgen Götze, Uwe Meyer, Helga Wiederhold	298
A well reasoned concept for public outreach benefits CO ₂ storage – The Ketzin pilot site, Germany Alexandra Szizybalski, Tanja Kollersberger, Fabian Möller, Sonja Martens, Michael Kühn	299
Numerische Simulationen zur Untersuchung der gleichzeitigen Nutzung eines salinen Grundwasserleiters zur geothermischen Energiegewinnung und geologischen CO ₂ -Speicherung Elena Tillner, Thomas Kempka, Benjamin Nakaten, Michael Kühn	300
Lagerstättenerkundung im gewachsenen Lockergestein mit einem akustischen GeoScanner Hossein Tudeski, Heiko Hertel, Uta Alisch, Heike Olbrich	301
A8: Sinkhole and subrosion processes	302
Formation of large collapse dolines: A three-dimensional numerical perspective Thomas Hiller, Georg Kaufmann, Douchko Romanov, Franci Gabrovšek	303
Hydrodynamics and hydrochemistry of drowned potash salt mines in Staßfurt, Lower Saxony (Germany) Christoph Jahnke, Antje Bohn, Susanne Stadler	304
Imaging of urban sinkhole structures – combined P-wave and shear-wave reflection seismics in the metropolitan region of Hamburg/Germany Charlotte M. Krawczyk, Ulrich Polom, Torsten Dahm	305
Georisiko Erdfall in Schleswig-Holstein - Status und Ergebnisse zur Erdfallgefährdung im Bereich von Salzstockhochlagen Reinhard Kirsch, Thomas Liebsch-Dörschner, Claudia Thomsen	306
Formation of cover-collapse sinkholes in the Franconian Alb / Germany Martin Trappe, Tobias Heckmann, Sarina Mehlhorn, Helmut Miedaner, Kathrin Umstädtter, Michael Becht	307
Sinkhole Formation above Flooded Potash Mines: 4D Back-Analysis of Dissolution Processes in the Friedenshall Mine, Bernburg District, Central Germany Andreas H.-P. Wölke, Gerhard Jost, Heidrun Rauche, Henry Rauche	308
A9: From outcrop to experiment: New tools in structural geology	309
Lateglacial faulting along the Osning Thrust in Central Europe Christian Brandes, Jutta Winsemann, Julia Roskosch, Janine Meinsen, David C. Tanner, Manfred Frechen, Holger Steffen, Patrick Wu	310
Lateral Segmentation and Vertical Linkage of a Normal Fault array in a Deltaic setting, Niger Delta, Nigeria Hamed Fazli Khani, Stefan Back	311
Advanced texture analysis in view of deformation and recrystallisation processes of rocks Bernd Leiss, Helmut Klein, Michael Stipp, Klaus Ullemeyer, Jens Walter	312
Ein konjugiertes Störungssystem im Süddeutschen Molassebecken Hartwig von Hartmann, David C. Tanner	313
Litho- & Biostratigraphie, Beckenentwicklung / Litho- & biostratigraphy, basin development	314
L1: Das Quartär: Klima, Sedimente, Mensch	315
Bodenmonitoring mit faseroptischen Extensometern Heinz Döring	316
The MIS 3 at the cliffs of NW Jasmund (SW Baltic Sea coast) Michael Kenzler, Stefan Meng, Heiko Hüneke	317

From source to sink: The drainage pathway of the Middle Pleistocene Weser lake outburst floods Janine Meinsen, Jutta Winsemann, Andreas Lenz, Manfred Dölling, Josef Klostermann	318
Endo- oder exogen? Zur Landschaftsgenese in Norddeutschland Werner Stachebrandt, Anne Stachebrandt.....	319
L2/L3: Stratigraphy, sedimentology and palaeoenvironments of Jurassic to Paleogene basins in western Europe	320
The Eocene Azolla phenomenon: a western European perspective Margaret E. Collinson, Judith Barke, Johan van der Burgh, Johanna H. A. van Konijnenburg-van Cittert, Martin A. Pearce, Jonathan Bujak, Claus Heilmann-Clausen, Henk Brinkhuis	321
Lake Messel and other isolated Paleogene deposits on the Sprendlinger Horst, Hesse, Germany – important records of palaeoclimate and palaeoenvironment of Central Europe Olaf K. Lenz, Volker Wilde, Walter Riegel.....	322
Kurdistan Foreland Basin Developments during Late Cretaceous and Early Tertiary, Western Zagros Fold Thrust belt, Kurdistan Region (NE-Iraq) Fadhil Ahmed Ameen	323
First high-resolution d13C-records across black shales of the Early Aptian Oceanic Anoxic Event 1a within the mid-latitudes of northwest Europe (Germany, Lower Saxony Basin) M. Heldt, J. Mutterlose, U. Berner, J. Erbacher	324
Lithostratigraphie der außeralpinen Weißjura-Gruppe der Frankenalb (Oberjura, Bayern) Birgit Niebuhr, Thomas Pürner	325
Late Cenomanian to Early Coniacian (early Late Cretaceous) facies development and sequence stratigraphy of the Bodenwöhrener Senke (eastern Bavaria, southern Germany) Nadine Richardt, Birgit Niebuhr, Markus Wilmsen.....	326
Early Late Cretaceous (Cenomanian–Turonian) sea-level changes: sequence stratigraphic correlations around the Mid-European Island Markus Wilmsen, Nadine Richardt.....	327
Eustatic and authigenic controls on fluvial-dominated deltaic systems – an example from the Toarcian-Aalenian of the North German Basin Jens Zimmermann, Matthias Franz, Markus Wolfgramm	328
The terrestrial Middle Eocene of Germany: insights from well known lagerstaetten Volker Wilde, Meinolf Hellmund, Herbert Lutz	329
L4: Perm und Trias in Mitteleuropa: Paläogeographie, Stratigraphie, Fazies, Rohstoffe, Ressourcen Permo-Triassic in Central Europe: paleogeography, stratigraphy, facies, natural resources	330
The Triassic of the Central European Basin Gerhard H. Bachmann	331
Triassic Geothermal Reservoirs of the North German Basin Matthias Franz, Markus Wolfgramm, Gregor Barth, Kerstin Rauppach, Jens Zimmermann	332
The Rotliegend of the Southern Permian Basin Reinhard E. Gast	333
Hydrogeological relevance of Triassic sediments Wolfgang Gossel, Ronny Lähne, Peter Wycisk	334
Oil and gas fields in the Triassic of Germany Berit Legler	335
Integrating sedimentary cycles, petrophysics and magnetic methods for sandstone reservoir characterization: a case study from the fluvio-lacustrine Buntsandstein, Germany Sven Maerz, Michael Szuradies, Maria Mutti, Matthias Zeug.....	336

Magnetostratigraphy and global correlation of the Rotliegend of Inner-Variscan basins Manfred Menning, Valerian Bachtadse.....	337
Erkenntnisse zur Metallverteilung und Lithologie aus den Neubohrungen der KSL Kupferschiefer Lausitz GmbH in der Kupferlagerstätte Spremberg-Graustein-Schleife Dieter Mucke, Rolf Kumann, Thomas Kaltschmidt	338
Zechstein – Präsentation und Analyse außergewöhnlicher Sedimente Josef Paul	339
Gips – und Anlyritgesteine der Germanischen Trias Matthias Reimann, Volker Stein	340
High-resolution base-level cycles and sand dispersal directions around the Permian-Triassic boundary in Western and Central Europe Michael Szurlies, Mark Geluk, Wout Krijgsman, Wolfram Kuerschner	341
L6/G1: Geology and resource potential of the Northern High Latitudes	342
Hydrocarbon Migration within Triassic and Jurassic Sediments at Sassenfjorden, Spitsbergen (Western Barents Sea) Ulrich Berner, Bernhard Cramer, Karsten Piepjohn, Pjotr Sobolev	343
Geophysical evidence for active petroleum systems, migration and sea floor venting in the Baffin Bay region of Nunavut, Canada Tom Brent, Gordi Oakey.....	344
Evolution and stratigraphy of the internal basins along the West Greenland margin in southern Baffin Bay/Davis Strait Sonja Breuer, Volkmar Damm, Martin Block, Cornelia Kuhlmann, Ingo Heyde, Karsten Gohl	345
Thermal history reconstruction and landscape analysis: Cenozoic landform evolution of northern Svalbard Nina Dörr, Karsten Piepjohn, Frank Lisker, Cornelia Spiegel.....	346
Subsidence, rapid inversion and slow erosion of the Central Tertiary Basin of Svalbard: evidence from thermal history modeling Nina Dörr, Frank Lisker, Malte Jochmann, Thomas Rainer, Cornelia Spiegel	347
Intra-continental magmatism related to the opening of the Arctic Ocean – An overview Solveig Estrada, Friedhelm Henjes-Kunst.....	348
Plate tectonics during the formation of Laurasia – An Arctic perspective Uwe Kröner, Marco Roscher	349
Structural evolution of the north margin of the Canadian Arctic Archipelago: a passive continental margin dominated by Eurekan strike-slip tectonics Karsten Piepjohn, Werner von Gosen	350
Altered volcanic ashes in Paleocene/Eocene sediments of the Eureka Sound Group (Ellesmere Island, Nunavut, Arctic Canada) Lutz Reinhardt, Solveig Estrada, Harald Andrleit, Reiner Dohrmann, Karsten Piepjohn, Werner von Gosen, Donald W. Davis, Bill Davis	351
Provenance and characteristics of rocks from the Yermak Plateau, Arctic Ocean: Geochemical and petrographic constraints Florian Riefstahl, Solveig Estrada, Wolfram H. Geissler, Wilfried Jokat, Rüdiger Stein, Horst Kämpf, Peter Dulski, Rudolf Naumann, Cornelia Spiegel	352
The Eurekan Orogen: a transpressional fold-and-thrust belt Stephen Rippington, Helen Smyth, Robert Scott.....	353
Cenozoic erosion estimation and petroleum system modeling of the South Barents Sea Basin Peter Sobolev, Sascha Doering	354

Erosion history of the Arctic margin – examples from Svalbard and northern Canada Cornelia Spiegel , Nina Dörr, Frank Lisker, Karsten Piepjohn.....	355
The crust of Davis Strait and southern Baffin Bay – seismic refraction profiles between Canada and Greenland Sonja Suckro, Karsten Gohl, Thomas Funck, Ingo Heyde, Axel Ehrhardt, Bernd Scheckenberger, Volkmar Damm, Wilfried Jokat	356
North Kara Basin (Russian Arctic): An overview of geology and hydrocarbon potential Vladimir Verzhbitsky, Natalya Kosenkova, Roman Murzin, Viktor Vasilyev, Svetlana Malysheva, Dmitry Komissarov, Vasily Ananyev, Yury Roslov, Andrey Khudoley.....	357
The Pearya Shear Zone in the Canadian High Arctic and its implications for the Caledonian terranes Werner von Gosen, Karsten Piepjohn, William C. McClelland, Andreas Läufer.....	358
Polyphase Eurekan deformation along the Vendom Fiord Fault Zone on south Ellesmere Island (Canadian Arctic) and its possible relation to the Wegener Fault Werner von Gosen, Karsten Piepjohn, Lutz Reinhardt.....	359
L7: Salzformationen – Zusammensetzung, Internbau, Deformationsmechanismen und Barriereeigenschaften Salt formations – composition, structure, deformation mechanisms and barrier properties.....	360
Design and Construction of Caverns in Salt Dome Structures: Application of Advanced Exploration Methods and 3D Modelling Christina Beckmann, Sven Wille, Fritz Wilke, Max Wippich	361
3D-Modell der Bergwerke und der Geologie des Staßfurter Salzsattels als Basis für die Beurteilung und Prognose von Bergschäden Christian Dresbach, Maximilian Pusch, Jörg Hammer, Gerhard Mingerzahn, Stephanie Fleig, Joachim Behlau	362
Kinematik und Verwitterung von Salzstrukturen anhand von Beispielen aus ariden Klimabereichen Stefan Folle	363
Underground GPR measurements for spatial investigations in the salt dome Gorleben Volker Gundelach, Norbert Blindow, Ulrich Buschmann, Christina Salat.....	364
Chemische Reaktionen bei Aufheizexperimenten mit Kohlenwasserstoffen in Anwesenheit von Salzen Andreas Haeger, Christian Ostertag-Henning	365
Visualisierung und 3D-raumbezogene Auswertung von Kartierergebnissen zur Ausbildung der Gorleben-Bank im Salzstock Gorleben mit Hilfe von GEOravis Tatjana Kühnlenz, G. Mingerzahn, Jörg Hammer, M. Saßnowski, J. Kutowski	366
Mechanical behaviour of anhydrite rocks: results of field investigations and mineralogical-geochemical studies Michael Mertineit, Joachim Behlau, Jörg Hammer, Michael Schramm, Gernold Zulauf.....	367
Effect of confining pressure on plastic flow of salt at 20-125C N. Muhammad, C. J. Spiers, C. J. Peach, J. H. P. De Bresser	368
Größenbestimmung von Kohlenwasserstoffvorkommen in Salzgesteinen Thomas Nowak, Jörg Hammer, Maximilian Pusch	369
Verteilung von Kohlenwasserstoffen im Stassfurt-Hauptsalz des Salzstocks Gorleben – Untersuchungen mittels Polarisationsmikroskop, ESEM und CLSM Maximilian Pusch, Jolanta Kus, Jörg Hammer.....	370
Investigation on creep of rock salt - the stress sensitivity of the creep rate Otto Schulze	371
Microstructural investigation and CT imaging of hydrocarbon-bearing Gorleben rock salt: Deformation mechanisms and fluid characteristics Nicolas Thiemeyer, Maximilian Pusch, Jörg Hammer, Gernold Zulauf.....	372

Anwendung von Natron-Wasserglas im salinaren Milieu Lieselotte E. von Borstel, Hans-Joachim Engelhardt	373
Experimental boudinage of anhydrite in rock-salt matrix: The impact of bulk finite strain geometry Gernold Zulauf, Janet Zulauf , Michael Mertineit, Jörg Hammer	374
Freie Themen / Free Topics	375
Careers in Mineral Exploration – What to Expect from a Life in Exploration Benedikt Steiner.....	376
Poster	377
Natürliche Ressourcen für die Technologien der Zukunft /	
Natural resources for technologies of the future Mineralische Rohstoffe / Mineral resources ... 378	
M1: Mineral resources for high tech and green technologies	379
NTH Graduate School GeoFluxes Georesources: 'The Role of Fluidexchange in Earth and Environmental Systems' M. Albrecht, T. Broder, J.F. Carstens, I.Derrey, M. Junge, C. Poggenburg, K. Raabe, A. Stechern, T. Weber, A. Węgorzewski	380
In-situ trace element investigation of chalcopyrite from vein-type hydrothermal mineralization of the Siegerland-Wied-District by LA-ICP-MS to unravel mineralization sequences Andy Cormann, André Hellmann, Franz Michael Meyer.....	381
The Londonderry Pegmatite Group near Coolgardie, Eastern Goldfields Terrane, Yilgarn Craton, Western Australia Thomas Dittrich, Thomas Seifert, Bernhard Schulz, Steffen Hagemann	382
Evolution of the REE distribution in clay sediments from Germany Knut Hahne, Konrad Bartzsch, Rudolf Naumann, Heike Rothe, Sabine Tonn, Dieter Weyer	383
VMS deposit alteration and its impact on the behavior of critical elements Martin Koppelberg, Franz Michael Meyer, Sven Sindern, Ulrich Kramm, Gösta Hoffmann, Robert Willis	384
REE-bearing and REE-minerals of carbonatites of the northern part of Delitzsch complex, Saxony-Anhalt Christian Marien, Marco Fiedler.....	385
REE in karst bauxites: Examples from Southern Italy N. Mondillo, M. Boni, G. Balassone	386
3-D modeling of Co-Cu-Au-mineralization bearing quartz-siderite lodes of the Alte Buntekuh mine in the Siegerland District with the software AutoCAD and Datamine Studio3 Meike Peters, André Hellmann, Franz Michael Meyer	387
Indium, silver, gold, and tin potential of late-Variscan polymetallic sulfide mineralization stages in the Freiberg Ag-base metal district, Erzgebirge, Germany Thomas Seifert	388
M2: Marine mineral resources	389
Tektonische Entwicklung des östlichen deutschen Manganknollen-Lizenzgebietes Meike Bagge, Udo Barckhausen.....	390
The spreading system north of the Rodriguez Triple Junction (Indian Ocean) – structural investigations with respect to hydrothermal systems and the associated seafloor massive sulfides (SMS) Carolin Bartsch Udo Barckhausen, Ingo Heyde, Ralf Freitag, Shipboard Scientific Party.....	391

Structural tectonic interpretation of the Entenschnabel by using potential field data Ingo Dressel, Udo Barckhausen, Ingo Heyde, Rüdiger Lutz, Lutz Reinhardt.....	392
Petrology and Geochemistry of sulfide ores and their host rocks at the Rodriguez Triple Junction, southern Central Indian Ridge Henrike Franke, Katja Heeschen, Ulrich Schwarz-Schampera	393
M3: Mineral systems analysis – recent advances and applications in exploration	394
Preparation of grain mounds of heterogeneous mineral concentrates for automated mineralogy – An Example of Li-bearing Greisen from Zinnwald, Saxony, Germany Kai Bachmann, Sabine Haser, Thomas Seifert, Jens Gutzmer	395
Hypogene emplacement and supergene alteration of the dolomite-hosted Chichaklou Zn-Pb deposit, Takab Province, NW Iran Andreas Kamradt	396
Characterization of graphite ores and concentrates by SEM-based image analysis Dirk Sandmann, Sabine Haser, Jens Gutzmer	397
Rare Earth Elements in Fluorite Reinhard Wolff, István Dunkl, Hilmar von Eynatten	398
M4: Geomicrobiology and biohydrometallurgy	399
Is Quorum Sensing involved in regulation of polysaccharide export in <i>Acidithiobacillus ferrooxidans</i> ? Sören Bellenberg, Ruiyong Zhang, Mario Vera, Wolfgang Sand	400
Isolation of « <i>Ferrovum myxofaciens</i> »- and <i>Gallionella</i> -related strains using modified media Judith Kipry, Rawaa Jaffer Jwair, Nadja Gelhaar, Claudia Wiacek, Michael Schlömann.....	401
Copper winning by bioleaching of chalcopyrite with mesophilic, moderate thermophilic and extreme thermophilic microorganisms Beate Krok, Axel Schippers, Wolfgang Sand	402
Can leaching be controlled by quorum sensing molecules? Nanni Noël, Mario A. Vera, Wolfgang Sand.....	403
Bioleaching nur damit's „Bio“ ist? Andreas Zehnsdorf, Christian Löser, Heinz Seidel, Petra Hoffmann, Uwe Schlenker	404
Biofilm development and extracellular polymeric substances distribution of extreme acidophilic archaeon <i>Ferroplasma acidiphilum</i> Ruiyong Zhang, Sören Bellenberg, Mario A. Vera, Thomas Neu, Wolfgang Sand	405
M5: Certification of geological materials – Schemes and methods	406
Identification and discrimination of white marbles used in antiquity – the Paros/Proconnesos example Walter Prochaska, Gerd Rantitsch	407
Application of machine learning to distinguish Coltan ores from Central Africa Gerd Rantitsch, Christian Savu-Krohn, Frank Melcher, Torsten Graupner, Eike Gäßler.....	408
M6: Industriemineralen, Natursteine, Steine und Erden	409
Erzgebirgischer Marmor – Potentiale des Neuaufschlusses der Lagerstätte Hammerunterwiesenthal für die Geoforschung Lutz Geißler	410
Recent Potash Exploration in the Sakhon-Nakon and Khorat Basin, Southeast Asia Andreas Jockel, Heidrun Rauche, Jana Neubert, Andreas Pihan, Manuela Gruber	411
Recent Potash Exploration in South America Andreas Jockel, Sebastiaan van der Klauw, Jana Neubert, Maria Wahle, Eike Kaps, Henry Rauche, Flávio de Lima Faria	412

Recent Potash Exploration in the Danakhil Depression, East Africa Jana Neubert, Sebastiaan van der Klauw, Andreas Wölke, Maria Wahle, Julia Onneken, Nina Dworazik, Christian Assmuth, Diana Müller, Wasili Michajljow, Alireza Hezarkhani, Mehran Azimi, Christian Fritze, Heidrun Rauche, Manish Rathod.....	413
Verbreitung und Eignungsbewertung des Rohstoffes Kiessand in Österreich Sebastian Pfeiderer, Maria Heinrich, Heinz Reitner, Thomas Untersweg.....	414
Erkundung von Grauwacken in Niedersachsen im Rahmen der Rohstoffsicherung Heinz-Gerd Röhling.....	415
Steine und Erden – Vorkommen und Gewinnung in der Bundesrepublik Deutschland Simone Röhling	416
Kalkstandard-Zyklen und QSO – ein zyklonstratigraphisches Werkzeug im Steinbruch-Management am Beispiel der Oberkreide-zeitlichen Mergelkalke von Höver bei Hannover Ekbert Seibertz, Bernd-Henning Reupke.....	418
Recent Potash Exploration in West Africa Sebastiaan van der Klauw, Jana Neubert, Andreas Jockel, Manuela Gruber, Henry Rauche, Hagen Hopf... 419	
Rohstoffsicherung für die Denkmalpflege – aktuelle Beispiele aus Südwestdeutschland Wolfgang Werner, Jens Wittenbrink	420
M9: Historische Bergbauzeugen und Potentiale für eine postmontane Nutzung.....	421
The historical mining sites of the geotope area Werdenfels (Southern Bavaria, Germany) and their potential for geoeducation Hubert Engelbrecht, Peter Schwarz	422
Pumped Storage Power Plants in Coal Mines of the Ruhr Region Holger Luick, André Niemann, Eugen Perau, Ulrich Schreiber.....	423
Die Harzer Eisenerzgruben: Erzgenese, Bergbaugeschichte, heutige Nachnutzung und neue Nutzungspotentiale Dieter Mucke	424
Schaubergwerke und Bergbaumuseen im Westharz: 1000 Jahre Bergbaugeschichte im Geopark Harz . Braunschweiger Land . Ostfalen aktiv erleben Heinz-Gerd Röhling.....	425
The Upper Harz Water Supply System – a new World Heritage Site in the Geopark Harz . Braunschweiger Land . Ostfalen Heinz-Gerd Röhling, Justus Teicke, Friedrich-Wilhelm Wellmer	426
M10: Raw materials: material flow analysis and life cycle assessment.....	427
Investigation of heavy minerals in a borehole profile from the Domsen Sands “Profen lignite mine” near Leipzig (Germany) Elisa Burmester, Julius Ludwig Jahn, Gregor Borg, Klaus Stedingk, Thomas Fischkandl, Michael Maurer, Wolfgang Voigt.....	428
Geo-Energie / Geo-Energy	429
G2: Beyond tradition – unconventional gas and oil from shale	430
Microbial conversion of oil, coal and shales into methane – a future energy resource? Martin Krüger, Friederike Gründger, Michael Siegert, Hans-Martin Schulz, Hans-Hermann Richnow	431
Confocal laser scanning microscopy (CLSM) applied to micro-structural analysis of alginite in the Huron Member of the Ohio Shale, Appalachian Basin, USA Jolanta Kus, Paul Hackley, Christian Ostertag-Henning	432

Temperature assessment of the dry gas zone by Raman spectroscopy and (U-Th)/He thermochronometry: Call for co-operation N.K. Lünsdorf, I. Dunkl, B.C. Schmidt, H. v. Eynatten	433
Methodology and first results of a volumetric gas-in-place assessment of shale gas resources in Germany Roberto Pierau, Ulf Rogalla, Dieter Franke, Andreas Bahr, Stefan Ladage, Ulrich Berner.....	434
Screening methodology of potential shale gas formations in Germany (Project NiKo) Ulf Rogalla, Roberto Pierau, Ulrich Berner, Jochen Erbacher, Stefan Ladage and NiKo-Project-Team...	435
Basic approach to estimate subsidence and effective palaeo heat flow of sediment basins using maturity data – Evaluation of the northwest German Wealden formation Eva Stiller, Ulrich Berner.....	436
Vergleich von verschiedenen Messmethoden im Hinblick auf ihre Eignung zur Charakterisierung von Shale Lagerstättengestein – Fallstudie: Posidonienschiefen aus Süddeutschland Florian Werunsky, Sabine Schatzmann.....	437
Geologic Conditions for Terrestrial Shale Gas Enrichment: Case Study from the Ordos Basin, North China Jingzhou Zhao, Yubin Bai, Qing Cao, Chuang Er, Wuxian Shen, Yuanfang Fan.....	438
G3: Coal & coalbed methane	439
Microbial Methane Formation and Oxidation in Abandoned Coal Mines in Germany Sabrina Beckmann, Bert Engelen, Tillmann Lüders, Heribert Cypionka, Martin Krüger.....	440
Application of Surfer and AutoCAD software for underground coal mines in Upper Silesian Coal Basin, Poland Marek Marcisz	441
G5: Geological CO₂ storage – capacities, integrity of the storage complex, uncertainties.....	442
Experimentelle Untersuchungen zu Sauergas-Fluid-Interaktionen Theodor Alpermann, Christian Ostertag-Henning	443
Volcanic CO ₂ seeps and their influence on freshwater environments Simone Gwosdz, Ingo Möller, Hans-Hermann Richnow, Martin Krüger	444
Geogenic CO ₂ releases in Belgium and Germany as natural analogues for the development and evaluation of monitoring tools and methods Ingo Möller, Kris Piessens, Kris Welkenhuysen, Rindert Janssens, Stefan Schlömer	445
Stable carbon isotope changes help predict CO ₂ behaviour in the subsurface A. Myrttinen, V. Becker, R. van Geldern, M. Nowak, J.A.C. Barth.....	446
Carbon dioxide affects growth and sulphate reduction of thermophilic <i>Petrobacteria</i> sp. Jana Rakoczy, Claudia Gniese, Hans-Hermann Richnow, Axel Schippers, Martin Krüger	447
Hierarchical monitoring approach to detect CO ₂ releasing areas at the ground surface Claudia Schütze, Uta Sauer , Stefan Schlömer, Carsten Leven, Peter Dietrich.....	448
Monitoring of a simulated carbon dioxide leakage into a shallow aquifer using stable carbon isotopes Alexandra Schulz, Carsten Vogt, Hendrik Lamert, Matthias Beyer, Anita Peter, Hans-Hermann Richnow	449
Permeability effects in saline sandstone aquifers during CO ₂ sequestration induced by clay particle migration K. Sell, F. Enzmann, E. Spangenberg, M. Kersten	450
Analysis of an integrated carbon cycle for storage of renewables Martin Streibel, Michael Kühn	451
Sub-seismic deformation prediction of potential pathways and seismic validation - joint project PROTECT Jennifer Ziesch, Thies Beilecke, David C. Tanner, Charlotte M. Krawczyk and the PROTECT research group	452

G6: Tiefe Geothermie – geologische Strukturen für die Energiegewinnung	453
Infrastruktur von Störungszonen im Buntsandstein – Anwendung für die geothermische Exploration im Oberrheingraben	
Johanna F. Bauer, Silke Meier, Sonja L. Philipp	454
Geothermal reservoir analogs for the northern Upper Rhine Graben (SW-Germany): Controlling parameters of petrophysical properties in the Buntsandstein, Odenwald and Pfälzerwald	
Maria Fensterer, Robert Schöner, Harald Stollhofen.....	455
Charakterisierung von Störungszonen in Aufschlussanalogia potentieller geothermischer Reservoirs des Oberrheingrabens	
Silke Meier, Johanna F. Bauer, Sonja Philipp	456
Lithospheric scale 3D structural and thermal modeling of the European Molasse Basin	
Anna Przybycin, Magdalena Scheck-Wenderoth, Michael Schneider	457
Reservoir properties of the Middle Buntsandstein in the boreholes Groß Buchholz-Gt1 (GeneSys-project Hannover) and Hämelerwald-Z1: Results of petrographical investigations	
Heinz-Gerd Röhling, Simone Heinig	458
Hydraulic analyses of a fractured geothermal vulcanite reservoir in the Northern German Basin	
Christiane Schneider, Conny Zeeb, Siegfried Siegesmund	459
Atlas to visualise potential conflicts of interest between CO ₂ storage (CCS) and deep geothermal energy (Geothermie-Atlas)	
Evelyn Suchi, Jan Dittmann, Stefan Knopf, Christian Müller, Rüdiger Schulz	460
Correlation between petrophysical properties and carbonate reservoir characteristics for a geothermal reservoir assessment	
Eva Wegerer, Guenter Hoffellner.....	461
G8: Reservoir rocks: New approaches for evaluation of processes in the pore space.....	462
Mineral surfaces exposed to the pore space in Buntsandstein sandstones of the Thuringian Basin	
Daniel Beyer, Cindy Kunkel, Ulrike Hilse, Michaela Aehnelt, Thomas Voigt, Dieter Pudlo, Reinhard Gaupp	463
Illite morphologies – Impact on reservoir properties and attempts of a classification scheme	
Susanne Bock, Nadine John, Michaela Aehnelt, Reinhard Gaupp	464
Morphological types of authigenic illite and their impact on reservoir quality parameters, Upper Carboniferous, NW Germany	
Susanne Bock, Michaela Aehnelt, Reinhard Gaupp	465
The solid interface: Effect of iron-containing minerals during thermochemical sulfate reduction? – An experimental study	
Svenja Germerott, Christian Ostertag-Henning, Hubert Allbaum	466
Reservoir quality prediction of dual porosity systems – Upper Carboniferous tight gas sandstones in the Lower Saxony Basin, NW Germany	
M. Heyn, S. Kobstädt, Michaela Aehnelt, Susanne Bock, Reinhard Gaupp	467
Pore space evolution and fluid characteristics in Permosilesian and Buntsandstein aquifer sandstones in the Thuringian Basin, Central Germany	
Ulrike Hilse, Michaela Aehnelt, Daniel Beyer, Cindy Kunkel, Christian Deicke, Dieter Pudlo, Reinhard Gaupp	468
Parametrization of reservoir quality classes and a new geometric model for the determination of pore-mineral interfaces in Rotliegend sandstones of central Germany	
Bernd Kohlhepp, Reinhard Gaupp.....	469
Fungal alteration of organic coatings on sand grains	
Steffi Rothhardt, Gerd Gleixner, Karim Benzerara, Cornelius Fischer, Reinhard Gaupp	470

3D microstructural and microchemical FIB-SEM study of nanoscale features in faulted Paleozoic reservoir rocks, North German Basin Jasmaria Wojatschke, Laurence N. Warr	471
Wasser & Boden / Water & Soil	472
W1: Rohstoff Wasser	473
Chemical and isotope compositions of geothermal waters from high-grade metamorphic terrain of Sri Lanka Rohana Chandrajith, Johannes A.C. Barth.....	474
Tschernobyl, Fukushima, ...? Unterirdische Wasserressourcen schützen! Dieter Mucke, Susanne Mucke	475
Aerogeophysikalische Kartierung von Grundwasserleitern im Weser-Elbe-Gebiet Bernhard Siemon, Martha Ibs-von Seht, Annika Steuer, Marion Miensopust, Wolfgang Voß, Uwe Meyer, Helga Wiederhold.....	476
Angewandte Geowissenschaften / Applied geosciences	477
A1 : Applied geological remote sensing.....	478
BGR-Beiträge zu den GMES-Vorhaben Terra firma und PanGeo Corinna Wolf, Nico Adam, Kai Hahne, Friedrich Kühn, Uwe Schäffer.....	479
A3: From tools to interpretation – modern methods in downhole logging and log interpretation for all kinds of georesources such as conventional or unconventional hydrocarbons, geothermal reservoirs, or groundwater	480
Einsatz bohrlochgeophysikalischer Messverfahren zum Erz- und Spatnachweis Michael Maurer, Dietrich Stiller, Wolfgang Voigt, Konrad Förster.....	481
A4: Quaternary geochronology	482
High-quality kaolins produced by bacterial treatment V. Groudeva, M. Iliev, R. Ilieva, S. Groudev.....	483
Luminescence dating of Holocene dune complexes along the shore of northern France (Picardy, Boulonnais) Tobias Lauer, Manfred Frechen, Murielle Meurisse-Fort.....	484
OSL dating of Middle Pleistocene ice-marginal deposits of the Leinebergland area (Germany) Julia Roskosch, Axel Weitkamp, Lukas Pollok, Ulrich Polom, Christian Brandes, Sumiko Tsukamoto, Manfred Frechen, Jutta Winsemann	485
Luminescence Chronology of Loess Paleosol Sequences in the Mainz Basin, Upper Rhine Area (Germany) Astrid Techmer, Michael Weidenfeller, Manfred Frechen.....	486
A6: GIS und 3/4D-Modellierung in den Geowissenschaften	487
GIS-based investigation of hidden recent active tectonic structures in the Canterbury Plains, New Zealand, by means of soil air radon measurements Christina Bonanati, Rouwen Lehné, Tim Davies, Michael Schubert	488
Holocene depositional processes in the area of Olympia (Greece) and their evaluation by GIS-based analyses, radon measurements and analyses of soil samples Rouwen Lehné, Andreas Hoppe, Nicole Mertz, Marie Mohr, Hanna Reinheimer, Ulrike Simons, Andreas Vött	489
Spatial occurrence of mass movements and their GIS-based modeling in the Lesser Himalaya of central Nepal Prem Thapa, Tobias Faisst, Rouwen Lehné, Andreas Hoppe	490

Internetplattform – www.3d-geology.de Peter Wycisk, Ronny Lähne.....	491
A7: GEOTECHNOLOGIEN	492
Assessment of fault flow and transport processes using a virtual element concept for description of faults at reservoir scale Benjamin Nakaten, Elena Tillner, Thomas Kempka.....	493
Combination of 1D and 3D HEM conductivity models Angelika Ullmann, Bernhard Siemon.....	494
A8: Sinkhole and subrosion processes	495
SinkMon – Proposal for the seismological component to monitor a sinkhole structure and subrosion processes in the urban environment Dirk Becker, Torsten Dahm, Charlotte Krawczyk	496
Revealing hidden karst structures: From geophysical measurements towards predictive modelling Georg Kaufmann, Grit Jahn, Douchko Romanov.....	497
Seismic investigation of a sinkhole in Northeim, Lower Saxony David C. Tanner, Ulrich Polom, Swenja Rosenwinkel, Charlotte M. Krawczyk	498
Litho- & Biostratigraphie, Beckenentwicklung / Litho- & biostratigraphy, basin development ...	499
L1: Das Quartär: Klima, Sedimente, Mensch	500
Micromorphological and structural investigations of the Pleistocene tills from the Jasmund peninsula (Isle of Rügen) Johannes Brumme, Heiko Hüneke.....	501
250 years of industrial mining and its impact on ecosystem earth. Global, regional and local consequences Hubert Engelbrecht	502
Micro-scale analysis of a tectonic contact between Cretaceous and Pleistocene sediments at Jasmund/Rügen Anna Gehrmann, Martin Meschede, Heiko Hüneke.....	503
Climate control on the evolution of Upper Pleistocene alluvial fan and aeolian sand sheet systems: the Senne (NW Germany) Janine Meinsen, Jutta Winsemann, Julia Roskosch, Christian Brandes, Manfred Frechen.....	504
L2/L3: Stratigraphy, sedimentology and palaeoenvironments of Jurassic to Paleogene basins in western Europe	505
Palynofacies patterns of the Triassic–Jurassic boundary (NE Germany): record of palaeoenvironmental and climate change Annette E. Götz & Sascha Gast	506
Steps to a 3D model of the Grimmen anticline and its implications for Jurassic-Cretaceous evolution at the north-eastern margin of the North German Basin Niels Jessen, Martin Meschede, Karsten Obst.....	507
Transnational transects between Germany and Poland – Characterisation of Jurassic reservoir and seal formations from borehole correlation connecting the eastern North German Basin and western Polish Trough Gesa Kuhlmann, Anna Becker, Anna Feldman-Olszewska, Thomas Höding, Christian Müller, Karsten Obst, Grzegorz Pieńkowski	508
Biostratigraphie und -fazies der Kernbohrung Eulenflucht 1 (Süntel, Niedersächsisches Bergland) Friedrich W. Luppold, Carmen Heunisch	509

Stratigraphische Daten (Trias-Jura) von Korca-Region (Blatt 42 Maliq, Albanien) Onuzi Kujtim, Pirdeni Agim, Hoxha Vesel	510
Depositional evolution of the Paleogene Schöningen rim syncline, an example of the unique interplay of salt tectonics and sea level change Ariana Osman, Lukas Pollok, Christian Brandes, Jutta Winsemann	512
Bilddokumentation der Bohrung Eulenflucht 1 mit dem Multi-Sensor Core Logger Barbara Piesker, Sabine Stäger & F.W. Luppold	513
Stratigraphic sequences contributing to a sequence-stratigraphic model of Northwest European Cenozoic Basin Andreas Schäfer, Torsten Utescher	514
Towards a harmonized lithostratigraphic nomenclature for the Cenozoic of the Upper Rhine Graben of Germany, France and Switzerland Ulrike Wielandt-Schuster, Edgar Nitsch, Birte Anders, Laurent Beccaletto, Horst Dresmann, Dietrich Ellwanger, Jost Hanke, Peter Huggenberger, Michael Weidenfeller, and GeORG Project Team.....	515
L4: Perm und Trias in Mitteleuropa: Paläogeographie, Stratigraphie, Fazies, Rohstoffe, Ressourcen / Permo- Triassic in Central Europe: paleogeography, stratigraphy, facies, natural resources	516
Characterisation of Buntsandstein deposits in the German North Sea sector Anke Bebiolka, Dirk Kaufmann, Gesa Kuhlmann	517
Distribution of Permo-Triassic rocks at the north-eastern margin of the North German Basin - Interpretation of re-processed reflection profiles in the southern Baltic Sea Andre Deutschmann, Martin Meschede, Karsten Obst	518
Lithostratigraphische Gliederung des Muschelkalks in der Bohrung Groß Buchholz Gt1 (GeneDys-Projekt Hannover) anhand geophysikalischer Bohrlochmessungen Sascha Gast, Heinz-Gerd Röhling	519
Cross-border petroleum systems modelling in the southern North Sea (Germany-Netherlands) Sabine Heim, Susanne Nelskamp, Rüdiger Lutz, Hanneke Verweij, Lutz Reinhardt	520
Deformation of Rotliegend salt formations and their influence on the structural pattern in the German North Sea Fabian Jähne, Anke Bebiolka, Jashar Arfai, Rüdiger Lutz	521
Correlation of Triassic reservoir and seal formations from borehole evidence in the eastern part of the North German Basin / western part of the Polish Trough - Transnational transects between Germany and Poland Gesa Kuhlmann, Anna Becker, Thomas Höding, Christian Müller, Karsten Obst, Grzegorz Pieńkowski	522
Towards a better understanding of facies and spatial variations of Lower and Middle Buntsandstein sediments in the Thuringian Basin: From outcrop to model Cindy Kunkel, Thomas Voigt, Daniel Beyer, Ulrike Hilse, Michaela Aehnelt, Dieter Pudlo, Reinhard Gaupp	523
Lithogeochemical Charakterisierung mittels tragbarer RFA von Kupferschieferhandstücken des ehemaligen Mansfelder Distriktes Tim Rödel, Marco Fiedler, Antje Migalk	524
Evaporitvorkommen der Trias im Southern Permian Basin Heinz-Gerd Röhling, Simone Röhling	525
Diagenesis of clay minerals in Tambach-sandstone (Tambach-Formation) of Thuringia, Germany Julia Schlosser, Georg H. Grathoff, Thomas Martens	527
Gondwanan palynostratigraphic perspectives applied to investigation of the Rotliegend and Zechstein, Germany Ellen Stolle	528
L6 / G1: Geology and resource potential of the Northern High Latitudes	529
Geochemistry and microbial populations in Arctic marine sediments from the Northern Baffin Bay	

and their potential for hydrocarbon turnover Camelia Algora, Friederike Gründger, Volkmar Damm, Hans-Hermann Richnow, Lorenz Adrian, Martin Krüger	530
CASE 13: Paleostress field analysis as a key for understanding the tectonic evolution of the New Siberian Islands and De Long Islands, NE Russian Arctic shelf Christian Brandes, Karsten Piepjohn, Christoph Gaedicke, Dieter Franke	531
Geological Interpretation of Aeromagnetic Anomalies over the Coastal Mountains of northern Ellesmere Island Detlef Damaske, Solveig Estrada	532
New interpretation of geophysical data of Laptev Sea sedimentary cover L. A. Daragan-Suschova, O. V. Petrov, Yu. I. Daragan-Suschov	533
CASE 13: On-Offshore correlation around the New Siberian Islands, Laptev and East Siberian Seas, Russian Arctic Dieter Franke, Christoph Gaedicke, Karsten Piepjohn, Christian Brandes, Nikolay Sobelev, Tatjana Tolmacheva, Benoit Mouly	534
The crustal built-up of the West Greenland margin in the Baffin Bay from marine gravity and seismic investigations Ingo Heyde, Martin Block, Sonja Breuer, Volkmar Damm, Cornelia Kuhlmann, Sonja Suckro	535
New insights into the lithosphere-scale structure of the Barents Sea/ Kara Sea region – a multidisciplinary approach Peter Klitzke, Jan Inge Faleide, Judith Sippel, Magdalena Scheck-Wenderoth	536
Spatial appearance of the continent ocean boundary in North Baffin Bay off West Greenland Cornelia Kuhlmann, Martin Block, Sonja Breuer, Volkmar Damm, Ingo Heyde	537
Thermal Maturity of Lower Palaeozoic Sediments in Western North Greenland Jolanta Kus, Thomas Pletsch	538
The geological evolution of the New Siberian Islands and their relationship to Svalbard and North America Karsten Piepjohn, Christian Brandes, Dieter Franke, Christoph Gaedicke, Sabine Mrugalla.....	539
Sedimentary evolution of Spitsbergen (Svalbard), PART I: The Early Carboniferous terrestrial environments (Billefjorden Group) Christian Scheibner, Christoph Hartkopf-Fröder, Dierk Blomeier, Holger Forke.....	540
Sedimentary evolution of Spitsbergen (Svalbard), PART II: The Middle Carboniferous marine transgression (Malte Brunfjellet Formation) Christian Scheibner, Dierk Blomeier, Karin Gesierich, Holger Forke	541
L7: Salzformationen – Zusammensetzung, Internbau, Deformationsmechanismen und Barriereeigenschaften / Salt formations – composition, structure, deformation mechanisms and barrier properties.....	542
Investigation of the Lanthanide Content of Talc- and Koenenite-Containing Samples of the German Zechstein Basin Hans-Joachim Engelhardt, Lieselotte E. von Borstel	543
Zusammensetzung und Menge von Flüssigkeitseinschlüssen im Staßfurt-Steinsalz des Zechsteins sowie von Salzversatz Hans-Joachim Engelhardt, Lieselotte E. von Borstel	544
Mineralbestand und geochemische Zusammensetzung des Staßfurt-Hauptsalzes (Knäuelsalz bis Kristallbrockensalz) im Salzstock Gorleben Hjördis Holler, Michael Martineit, Michael Schramm, Jörg Hammer	545
Detailed Exploration of the Internal Structure of Salt Domes from Boreholes: Applications in Storage Cavern Construction Margarethe Kleczar, Sven Wille, Jana Enghardt	546

Microfabric studies of Stassfurt rock salt at the Morsleben site (Germany): Constraints on the impact of finite strain magnitude on deformation mechanisms and palaeostress Tilo Kneuker, Gernold Zulauf, Michael Mertineit, Joachim Behlau, Jörg Hammer	547
Conditions of formation of potash salts of the section of borehole number 18 of Gremyachinsky deposit Vitali Kutyrylo, Viktorija Kutyrylo, Natalia Petrova, Jörg Hammer, Michael Schramm, Uladzimir Sauchanka.....	548
High-resolution Litho-stratigraphical Subdivision of the z2 (Stassfurt) and z3 (Leine) Formations (Zechstein, Permian) in the Groningen area, the Netherlands Jens Langer, Max Wippich.....	549
Ansatz zur Beschreibung der druckabhängigen Permeabilität der Auflockerungszone Nina Müller-Hoeppel, Holger Schmidt, Mirko Polster.....	550
Hematite indicator of potassic lithofacies in the evaporate formations Vladimir Samodurov, Anatoly Hrechka, Vital Kytyrylo, Vladimir Kozhyn, Yury Yalenski	551
Präparationstechnik zur Visualisierung des Porenraumes von kompaktiertem Salzgrus mittels Dünnschliffen Lieselotte E. von Borstel, Hans-Joachim Engelhardt, Michael Köhler	552
Stabilität von geliertem Natron-Wasserglas im salinaren Milieu Lieselotte E. von Borstel, Hans-Joachim Engelhardt	553
Microfabrics and deformation mechanisms of experimentally deformed and re-compacted Asse rock salt: The impact of grain boundary brine Janet Zulauf, Gernold Zulauf	554
Freie Themen	556
Geochemical features of granitoides of Trokuzi massif Isa Haklaj, Artan Tashko.....	557
Geological-structural formation of gabbro massive of Kaptena (Mirdita Ophiolites) and its interaction with the surrounding rocks Gjon Kaza, Kujtim Onuzi, Viktor Doda , Gjonaj.....	559