

# Gondwana Research

INTERNATIONAL GEOSCIENCE JOURNAL

ISSN: 1342-937X

(Indexed in Science Citation Index-Expanded, ISI Alerting Service, Current Contents and Georef  
and abstracted in Chemical Abstracts and Mineralogical Abstracts)

VOLUME 6, NO. 4

CONTENTS

OCTOBER 2003

## Thematic Section on Metamorphism and Magmatism in Rodinia and Gondwana

Guest Editors: M. Arima, M. Santosh and L.L. Perchuk

- Metamorphism and magmatism in Rodinia and Gondwana: introduction  
*M. Arima, M. Santosh and L.L. Perchuk*..... 555
- Calc-alkaline arc I-type granitoid associated with S-type granite in the Pan-African belt of eastern Anti-Atlas (Saghro and Ougnat, South Morocco)  
*M. El Baghdadi, A. El Boukhari, A. Jouider, A. Benyoucef and S. Nadem* ..... 557
- Deformation pattern in the Kurnool and Nallamalai groups in the northeastern part (Palnad area) of the Cuddapah basin, South India and its implication on Rodinia/Gondwana tectonics  
*Dilip Saha and Sukanya Chakraborty* ..... 573
- Enriched subcontinental lithospheric mantle in the northern part of the South Indian granulite terrain: evidence from Yelagiri and Sevattur syenite plutons, Tamil Nadu, South India  
*T. Miyazaki, H. Kagami, V. Ram Mohan, K. Shuto and T. Morikiyo* ..... 585
- Pan-African alkali granitoids from the Sør Rondane mountains, East Antarctica  
*Zilong Li, Yoshiaki Tainosho, Jun-ichi Kimura, Kazuyuki Shiraishi and Masaaki Owada* ..... 595
- Petrology, origin and metamorphic history of Proterozoic-aged granulites of the Natal metamorphic province, southeastern Africa  
*P. Mendonidis and G.H. Grantham* ..... 607
- A back-arc palaeotectonic setting for the Augaro Neoproterozoic magmatic rocks of Western Eritrea  
*M. Teklay, T. Haile, A. Kröner, Y. Asmerom and J. Watson* ..... 629
- The Central Granites-Gneiss-Migmatite Belt (CGGMB) of Madagascar: the eastern Neoproterozoic suture of the East African orogen  
*R.A. Rambeloson, V. Ramasiarino, M. Yoshida, L. Le Duc and B. Ralison* ..... 641

## Thematic Section on Growing Asian Continent and its Processes

Guest Editors: S. Hada and J. Aitchison

- Growing Asian continent and its processes: introduction  
*S. Hada and J. Aitchison*..... 655
- Restoration of exotic terranes along the Median Tectonic Line, Japanese islands: overview  
*Hideo Takagi and Hiroyoshi Arai* ..... 657
- Kurosegawa terrane as a transform fault zone in Southwest Japan  
*Kiyoshi Kato and Yukiyasu Saka* ..... 669
- Jurassic dextral and Cretaceous sinistral movements along the Hida Marginal belt  
*Kazuhiro Tsukada* ..... 687
- Remnants of a Neoproterozoic collisional orogenic belt in the core of the Phanerozoic Qinling orogenic belt (China)  
*Wang Tao, Wang Xiaoxia, Zhang Guowei, Pei Xianzhi and Zhang Chengli* ..... 699
- Metallogenic province derived from mantle sources: Nd, Sr, S and Pb isotope evidence from the Central Asian Orogenic belt  
*Hong Dawei, Wang Shiguang, Xie Xilin, Zhang Jisheng and Wang Tao*..... 711

(Contents continued on page 972)

© 2003 INTERNATIONAL ASSOCIATION FOR GONDWANA RESEARCH, JAPAN

WEBSITES: Gondwana Research: <http://www.gondwanaresearch.com>

International Association for Gondwana Research, Japan: <http://sc1.cc.kochi-u.ac.jp/IAGR/>

(Contents continued from outside back cover)

Characterization of quartzites in the southern Korean peninsula <i>Yongin Kim and Yong Il Lee</i> .....	729
Tectonic setting of the Permo-Triassic Chiang Khong volcanic rocks, northern Thailand based on petrochemical characteristics <i>Yuenyong Panjasawatwong, Burapha Phajuy and Shigeki Hada</i> .....	743
Petrology and geochemistry of the volcanic rocks dredged from the geophysicist seamount in the Kurile basin: evidence for the existence of thinned continental crust <i>Igor A. Tararin, Eugeny P. Lelikov and Reinhard Werner</i> .....	757
Mineralization Controls in island arc settings: insights from Philippine metallic deposits <i>G.P. Yumul, Jr., C.B. Dimalanta, V.B. Maglambayan and R.A. Tamayo, Jr.</i> .....	767
Global review of Permian Tyloplecta Muir-Wood and Cooper, 1960 (Brachiopoda): morphology, palaeobiogeographical and palaeogeographical implications <i>G.R. Shi and Z.Q. Chen</i> .....	777
Global distribution of Permian Conulariids and palaeobiogeographical implications <i>Elizabeth A. Weldon and G.R. Shi</i> .....	791

## Regular Papers

High temperature mylonitization of quartzofeldspathic gneisses: example from the Schirmacher Hills, East Antarctica <i>Santanu Bose and Sudipta Sengupta</i> .....	805
Depositional record of tidal-flat sedimentation in the Permian coal measures of Central India: Barakar Formation, Mohpani coalfield, Satpura Gondwana basin <i>Chandan Chakraborty, Sanjoy Kumar Ghosh and Tapan Chakraborty</i> .....	817
Neotectonic control on the geomorphic evolution of the Gangotri Glacier Valley, Garhwal Himalaya <i>Rameshwar Bali, Divya Darshan Awasthi and N.K. Tiwari</i> .....	829
The early Palaeozoic break-up of northern Gondwana: sedimentology, physical volcanology and geochemistry of a submarine volcanic complex in the Bavarian facies association, Saxothuringian basin, Germany <i>U. Martin, Th. Reischmann, H. Bahlburg, M. Schätz, J. Tait and V. Bachtadse</i> .....	839
Study of aeromagnetic data over part of Eastern Ghat Mobile belt and Bastar craton <i>S.P. Anand and Mita Rajaram</i> .....	859
Stress state, seismicity and subduction geometries of the descending lithosphere below the Hindukush and Pamir <i>P.K. Khan</i> .....	867
Characterisation of the Dabla granitoids, North Khetri copper belt, Rajasthan, India: evidence of bimodal anorogenic felsic magmatism <i>Naveen Chaudhri, Parampreet Kaur, Martin Okrusch and Annette Schimrosczik</i> .....	879

## GONDWANA NEWSLETTER NO. 21

### Editorial

A note on the impact factor of Gondwana Research <i>Joseph G. Meert</i> .....	901
--	-----

### Correspondence

Evidence for continent-continent collision zone in the South Indian Shield region <i>K. Naganjaneyulu and T. Harinarayana</i> .....	902
Gemstone mineralization in the Palghat-Cauvery Shear Zone system (Karur-Kangayam Belt), southern India <i>M. Santosh and A.S. Collins</i> .....	911

(Contents continued on inside back cover)

(Contents continued from page 972)

Facies clustering in turbidite successions: case study from Andaman Flysch Group, Andaman Islands, India <i>B. Mukhopadhyay, P.P. Chakraborty and S. Paul</i> .....	918
Sapphirine and corundum-bearing granulites from Karur, Madurai block, southern India <i>T. Tsunogae and M. Santosh</i> .....	925
$\delta^{13}\text{C}$ variations in late Jurassic carbonates, Jaisalmer Formation, western India <i>Anil Maheshwari, A.N. Sial, S.C. Mathur and R.P. Tripathi</i> .....	931
<b>Discussion</b>	
Structural framework of Deolapar area, Central India and its implications for Proterozoic Nappe Tectonics: comment <i>S. Mohanty</i> .....	934
Structural framework of Deolapar area, Central India and its implications for Proterozoic Nappe Tectonics: reply <i>A. Chattopadhyay</i> .....	936
<b>Obituary</b>	
Memorial assembly of late Professor Masao Gorai <i>K. Shuto, H. Kagami, T. Yoshimura, M. Inomata and M. Yoshida</i> .....	938
<b>Conference Reports</b>	
Report of the international symposium of IGCP-440 and LEGENDS proposal in Sri Lanka, March-April, 2003 <i>M. Yoshida, Y. Osanai, M. Owada, N. Nakano and W.K.W. Kehelpannala</i> .....	939
Observations in the Proterozoic geology of Sri Lanka: IGCP-440 field workshop, March-April, 2003 <i>M. Yoshida</i> .....	942
<b>Book Reviews</b>	
Tectonics of southern granulite terrain – Kuppam-Palani geotranssect <i>M. Santosh</i> .....	947
Himalayan collision tectonics <i>R.S. Sharma</i> .....	950
Earthquake studies in peninsular India – since 1993 <i>P.R. Reddy</i> .....	952
<b>Forthcoming Events</b>	
IGCP-485 meeting and field excursion – cratons, metacratons and mobile belts: keys from the West African craton boundaries Eburnian versus Pan-African signature, magmatic, tectonic and metallogenic implications .....	955
International symposium and field workshop on Gondwana evolution and dispersal .....	959
<b>New Book Announcement</b>	
Proterozoic East Gondwana: Supercontinent assembly and breakup <i>M. Yoshida, B.F. Windley and S. Dasgupta (Eds.)</i> .....	960
The planet Earth viewed from Africa <i>K. Suwa</i> .....	961
<b>Gondwana Research Referees</b> .....	962
<hr/>	
<b>Author Index</b> .....	964
<hr/>	