Indoor and Built Environment

Indoor Built Environ ISSN 1420-326X 25(1) 1–290 (2016)

Editorial

3 Heat stress and its impacts on occupational health and performance

A. P. C. Chan and W. Yi

Review

- 6 Prediction of the thermal comfort indices using improved support vector machine classifiers and nonlinear kernel functions A. C. Megri and I. E. Naqa
- 17 A mock-up study for validation of an improved control algorithm for automated roller shade K.-Y. Jeong, A.-S. Choi and M. Sung

Original Papers

- 29 Efficacy of an air curtain system for local pit environmental control for relic preservation in archaeology museums X. Luo, Z. Gu, C. Yu, T. Ma and K. Kase
- 41 Hexabromocyclododecanes in the indoor environment of two cities in South China: their occurrence and implications of human inhalation exposure

 J. Hong, S. Gao, L. Chen, Q. Han, Z. Yu, P. Peng and J. Fu
- 50 The application of analytic hierarchy process in daylighting performance assessment T.M. Chung and R.T.H. Ng
- 69 Glare indicators: an analysis of ocular behaviour in an office equipped with venetian blinds J. A. Y. Garretón, R. G. Rodriguez and A. E. Pattini
- 81 The home environment of junior high school students in Hyogo, Japan – Associations with asthma, respiratory health and reported allergies M. Takaoka, K. Suzuki and D. Norbäck
- 93 Residential ozone and lung function in the elderly E. V. Bräuner, D. G. Karottki, M. Frederiksen, B. Kolarik, M. Spilak, Z. J. Andersen, A. Vibenholt, T. Ellermann, L. Gunnarsen and S. Loft
- 106 Polybrominated diphenyl ether levels in dust collected from cars in Kuwait: Implications for human exposure
 B. Gevao, F. Shammari and L. N. Ali
- 114 Variable air volume air-conditioning experiment system with advanced controls Q. Meng, X. Yan, Q. Ren and H. Adeli
- 128 The acoustic characteristics of the Çarşı Mosque in Trabzon, Turkey
 M. Kavraz
- 137 Polycyclic aromatic hydrocarbons collected from indoor built environments on heating, ventilation and air conditioning dust filters
 M. F. Yassin, N. S. Alhajeri and M. A. Kassem

- 151 Moisture transport through asymmetric porous membranes with finger-like holes for indoor humidity control: A lattice Boltzmann simulation approach L.-Z. Zhang, R.-R. Cai and J.-C. Xu
- 169 A comparison of the estimated natural ventilation rates of four solid wall houses with the measured ventilation rates and the implications for low-energy retrofits
 P. Keig, T. Hyde and G. McGill
- 180 Effect of air flow rates on concurrent supply and exhaust kitchen ventilation system K. W. Yi, Y. I. Kim and G.-N. Bae
- 191 Evaluating the thermal comfort performance of heating systems using a thermal manikin with human thermoregulatory control E. Foda and K. Sirén
- 203 Ventilation effect on indoor radon-thoron levels in dwellings and correlation with soil exhalation rates R. P. Chauhan, A. Kumar, N. Chauhan, M. Joshi, P. Aggarwal and B. K. Sahoo
- 213 The physical environments and microbiological contamination in three different fitness centres and the participants' expectations: Measurement and analysis

 R. Onchang and M. Panyakapo
- 229 Investigation of the importance of tertiary contamination, temperature and human behaviour on PCB concentrations in indoor air B. Kolarik, M. Frederiksen, H. W. Meyer, N. E. Ebbehøj and L. B. Gunnarsen
- 242 Polycyclic aromatic hydrocarbons in settled dust particles in selected Ghanaian environments: Levels, source characterization, and assessment of inhalational health risks D. K. Essumang, J. Ofori, D. K. Dodoo and J. K. Adjei
- 254 Aldehyde emissions from lime plaster containing vegetable oil Y. Odaka, H. Seto, H. Nakaoka, M. Hanazato, E. Todaka and

C. Mori

Case Studies

- 262 Pre-adolescent concern for the natural environment according to gender S. Saricam
- 269 Indoor radon in dwellings of Jeddah city, Saudi Arabia and its correlations with the radium and radon exhalation rates from soil S. M. Farid
- 279 Urban trees as sunlight control elements of vertical openings in front façades in sunny climates. Case Study: *Morus alba* on north façade A. M. Villalba, A. E. Pattini and M. L. Córica