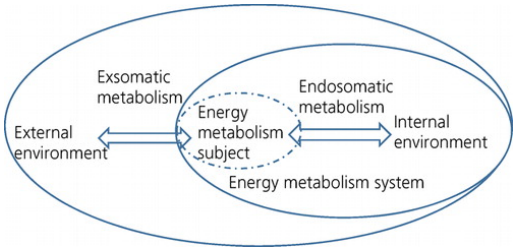
Energy Metabolism Concept at Sustainable Urban Context

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Abstract (not more than 300 words)

This paper focuses on urban metabolism (UM) methodology to account for energy flows in various independent service systems in cities, using urban metabolic network (MN) analysis, which would be of interest to municipalities, urban planners, urban managers, policy makers and researchers for developing healthy and sustainable cities. Several studies on material flow analysis and life-cycle assessment methodologies used to quantify the flow of energy within the urban metabolism framework. However, these approaches will need to improve so that more consistency is achieved in physical infrastructures. The UM energy analysis indicator provides a set of information, which is a better analysis of potential mitigation of greenhouse gases. UM approach can help to focus on the interface between urban infrastructure and energy flows within the infrastructure and various problems can be tackled, such as energy consumption, carbon dioxide emissions, water use, city sustainability and so on.

Keywords—*life-cycle, urban metabolism, sustainable cites.*

Professional Biography (100-150 words)

Vivek Kumar Singh a PhD Scholar in Sustainable Energy Systems at the University of Coimbra (UC) in the framework of the MIT-Portugal program. His research is focused on the study of energy efficiency models analysis for market transformation. Arnfried Cardoso Ziebell graduated with MSc. Energy for Sustainability, majoring in urban architectural engineering. He presented scientific papers.





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