

# The Economy as a Materials Processing System: A New Evolutionary Paradigm

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This lecture will recapitulate a semi-empirical theory of economic growth that accurately accounts for US economic growth from 1900 to 1998, as previously presented at IIASA. It will also present for the first time a quantitative forecasting model based on the theory, along with a number of scenario projections. The most important implication of the new theory is that, along a business-as-usual trajectory, the rate of historical growth can be expected to slow down gradually despite the contribution of information technology, and without assuming any resource scarcity. A zero growth rate can be expected between 2030 and 2040 AD. The sensitivity of the model to various assumptions, and policy implications, will be discussed.

Abstract for the International Energy Workshop  
jointly organized by the  
Energy Modeling Forum (EMF), International Energy Agency (IEA) and IIASA.  
24-26 June 2003 at IIASA Conference Center, Laxenburg, Austria