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| Autore | Bulushev Dmitri A |
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| Sommario/riassunto | This Special Issue is related to studies of the hydrogen production from formic acid decomposition. It is based on five research papers and two reviews. The reviews discuss the liquid phase formic acid decomposition over bimetallic (PdAg), molecular (Ru, Ir, Fe, Co), and heterogenized molecular catalysts. The gas-phase reaction is studied over highly dispersed Pd, Pt, Au, Cu, and Ni supported catalysts. It is shown that the nature of the catalyst’s support plays an important role for the reaction. Thus, N-doping of the carbon support provides a significant promotional effect. One of the reasons for the high activity of the N-doped catalysts is the formation of single-atom active sites stabilized by pyridinic N species present in the support. It is demonstrated that carbon materials can be N-doped in different ways. It can be performed either directly from N-containing compounds during the carbon synthesis or by a post-synthetic deposition of N-containing compounds on the carbon support with known properties. The Issue could be useful for specialists in catalysis and nanomaterials as well as for graduate students studying chemistry and chemical engineering. The reported results can be applied for development of catalysts for the hydrogen production from different liquid organic hydrogen carriers. |