



an Open Access Journal by MDPI

Guest Editors:

Dr. Leonarda Francesca Liotta

Institute for the Study of
Nanostructured Materials (ISMN)-
CNR, Palermo, Italy
leonarda.liotta@ismn.cnr.it



Prof. Dr. Tatyana Tabakova

Institute of Catalysis – Bulgarian
Academy of Sciences, Sofia,
Bulgaria
tabakova@ic.bas.bg



Submission Deadline:

31 December 2019

Twitter: @applsci

LinkedIn: applsci@mdpi.com

<https://susy.mdpi.com>



mdpi.com/si/18529

Au-Pd and Au-Pt NPs and Alloys for Catalytic and Electrocatalytic Applications

Message from the Guest Editors

Bimetallic nanoparticles (NPs) have received considerable attention for their unique optical, magnetic, electrical and catalytic properties, which are very different from those of their monometallic NP components and which are dependent on their morphology and composition. Au-Pd and Au-Pt bimetallic systems are attractive systems in low temperature CO and VOCs oxidation, PROX reaction, N₂O decomposition, vinyl acetate monomer synthesis, hydrodechlorination of CClF₂, hydrogenation of hydrocarbon, cyclotrimerization of acetylene, direct synthesis of hydrogen peroxide and so forth.

Proper characterization techniques, such as FT-IR, Raman, HR-TEM, XRD, XPS along with density functional theory (DFT)-based mechanistic studies, may elucidate whether the Au and Pd/Pt components are chemically segregated or intimately alloyed in the synthesized NPs, providing a fundamental understanding of their reactivity.

Based on the wide range of investigation and application of bimetallic Au-Pd and Au-Pt NPs, the present Special Issue aims to cover recent research progress, both theoretical and experimental, in the field of Au-Pd and Au-Pt alloys.

We invite you to submit your research in the form of original research papers, mini-reviews and perspective articles.

High visibility (Open Access Journal; Indexed by the Science Citation Index Expanded)

Rapid publication (Manuscripts are peer-reviewed and a first decision is provided to authors approximately 19 days after submission)

Fair peer-review process (rejection rate: 70% in 2017)