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## Advanced Pd Composite Membranes

Guest Editor:

### Dr. Sun Hee Choi

Clean Energy Institute, Korea  
Institute of Science and  
Technology, Seoul 136-791,  
Korea

Deadline for manuscript  
submissions:

**closed (31 October 2020)**

### Message from the Guest Editor

Palladium is the material that is the most examined as a H<sub>2</sub> selective membrane due to its relatively fast and unique permeation mechanism. However, Pd membranes are limited in terms of practical industrial applications because of the high material cost and H<sub>2</sub> embrittlement issues at low temperature under H<sub>2</sub> atmosphere. In order to solve the problems, porous substrates and Pd-alloying schemes are employed to fabricate composite membranes that avoid H<sub>2</sub>-embrittlement under targeted operation temperatures.

### Keywords

- palladium composite membranes
- ultrathin palladium membranes
- electroless plating
- sputtering
- membrane reactor
- renewable hydrogen



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### Prof. Dr. Spas D. Kolev

School of Chemistry, The  
University of Melbourne,  
Melbourne, VIC 3010, Australia

## Message from the Editor-in-Chief

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Membranes Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

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