

Special Issue

Thermodynamic Aspects of Coating Preparation, Especially for Corrosion Protection

Message from the Guest Editors

The thermodynamic aspects of coating preparation are specific and challenging issues for many reasons. In most coating depositions, the energy fluxes carried by the particles to the coating site are extremely high, and the process is extremely fast and takes place under a state of significant temperature rise and considerable thermodynamic imbalance. An important contribution to the targeted research of coating preparation is the thermodynamic aspect, especially with regard to the thermodynamics of thin, super-thin, hard, and super-hard layers. For this Special Issue, contributions will be welcome on both theoretical thermodynamics and experimental works dealing with the measurement of the temperature dependencies of coating formation. Potential topics for this Special Issue are as follows:

- Research of the thermodynamic properties of layers (especially of thin, super-thin, hard, and super-hard layers);
- Research of enthalpy/entropy for different types of coatings;
- Research on tool coatings resistant to extreme temperatures;
- Measurement of the temperature dependencies of coating formation.

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Message from the Editorial Board

Now more than ever, research is asked to deliver knowledge and technologies to solve the major challenges faced by our society. The development of new materials and devices for (without the ambition to be exhaustive) energy, health and food technology, together with the need for establishing processes that reduce the impact on critical resources and the environment, is indeed in the spotlight of most contemporary research. Surface science and engineering play a key role in this regard, with an incredible potential in delivering new and deep scientific understanding and technical solutions essential to solve most of the major societal challenges.

Coatings is a well-established, peerreviewed, online journal dedicated to the vibrant field of surface science and engineering. Coatings publishes original research articles that report cutting-edge results and review papers that make the point on the hottest research topics.

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