

Critical Reviews

Electrochimica Acta publishes Critical Reviews on topics within the field of electrochemistry, as defined by the interests represented by the divisions of ISE. These articles are not review articles in the traditional sense which, historically, set out to provide encyclopaedic coverage of the chosen topic but which, as a consequence of this, were generally constrained to relatively superficial analysis and interpretation. Previously, an important role of such reviews was locating and listing the sources (references) for the benefit of the reader. Presently, in the era of online search tools, this task is relatively straightforward, so the benefit a traditional review is somewhat diminished.

Critical Reviews are intended to be selective in coverage, focusing only on the more important and influential publications. This then permits the authors to explore the chosen works in greater detail and to compare and contrast the findings of different researchers. Ideally, this critique and analysis generates new knowledge and insights that progress the field.

Critical Reviews are commissioned by the Editor in Chief; this may be based on a proposal submitted to the Editor in Chief. Review articles submitted without prior consultation will generally be rejected. Authors wishing to pursue the opportunity to write a Critical Review should contact the Editor in Chief with an outline (either in ca. 200 words or as a list of contents), supported by the following information.

First, they should make clear how the work falls within the remit of the journal. In this respect, it is important to note that an ultimate electrochemical application does not necessarily generate an electrochemically-focused review. For example, a review of materials preparation and/or characterization for subsequent application in electrochemical energy storage devices would not have an electrochemical focus; similarly, neither would a review of analytical device performance that did not focus on the underlying electrochemical processes.

Second, the authors should demonstrate their publication-based track record in the field. Given that authors will critique the work of the leading experts in the field, they must have the intellectual authority and research reputation to accomplish this credibly.

Third, the authors should give an indication of the scale and scope of the review. The key issue here is avoidance of the trap of allowing the work to expand in coverage, with consequent loss of depth of analysis; see above.

Finally, the authors should list other (recent?) reviews in the field and state how their article will differ from these other reviews and will advance the field in ways that these other articles did not.

It may be that the proposal is not perfectly formulated in the first instance. However, if the topic in general terms is clearly of relevance and interest to the electrochemistry community, the journal will work with the authors to refine the proposal to the point at which it is suitable. In this respect, it is clear that authors who write a review and only then approach the journal for permission to submit are likely to receive a negative response.

Critical Reviews will be subject to the normal peer review process, although the criteria (e.g. in terms of novelty of content) will naturally be somewhat different to those for a regular research article. Dependent on the topic, the peer review process may be handled by one of the Associate Editors, whose research expertise includes the review topic.

Robert Hillman [13/12/17]