

## EFC WP ACTIVITY REPORT (September 2024 - August 2026)

<b>WP no.:</b>	<b>4</b>	<b>WP title :</b>	<b>Nuclear Corrosion</b>
<b>Chair:</b>	<i>Stefan Ritter, PSI, Switzerland</i>	<i>In office since:</i>	<i>01.01.2017</i>
<b>Vice-Chair:</b>	<i>Laure Martinelli, CEA, France</i>	<i>In office since:</i>	<i>01.01.2018</i>
<b>Secretary:</b>	--	<i>In office since:</i>	--

### MAIN OBJECTIVES FOR THE NEXT THREE YEARS

- To provide links between European teams and EU-funded programs in the nuclear corrosion field, with an opening on to the world.
- To initiate and stimulate opportunities of exchange of scientific and technical subjects related to nuclear corrosion, particularly on today's main nuclear research areas (waste systems, water reactors, generation IV and fusion reactors).
- To promote corrosion science and technical developments through events such as seminars, workshops, publications, etc.

### DETAILED MEASURES BY WHICH THE ABOVE OBJECTIVES WILL BE ACHIEVED

*(Please complete, as appropriate, using continuation pages if necessary.)*

No.	Type of activity	Target Date(s)
1	<b>WP meetings (state expected attendance levels &amp; business/technical split):</b> <ul style="list-style-type: none"> <li>• Fall business meeting during EUROCORR 2024 (15-25 participants)</li> <li>• Fall business meeting during EUROCORR 2025 (15-25 participants)</li> </ul>	09/2024 09/2025
2	<b>Sessions at EUROCORR (identify special topics):</b> <ul style="list-style-type: none"> <li>• Nuclear corrosion session during EUROCORR 2024 (3 days)</li> <li>• Joint session on “Molten salts &amp; ionic liquids in energy applications”, jointly organised with WP 3 &amp; 26 (1 day)</li> <li>• Nuclear corrosion session during EUROCORR 2025 (approx. 2.5 days)</li> </ul>	09/2024 08/2024 09/2025
3	<u>Cooperation with other WPs, e.g. Joint Sessions at EUROCORR (give details):</u> <ul style="list-style-type: none"> <li>• A joint session with WP 3 &amp; 26 is organised for EUROCORR 2024 on “Molten salts &amp; ionic liquids in energy applications”.</li> <li>• Cooperation with the Young EFC or EFC’s Social Media Team is ongoing, e.g., concerning the WP 4 prizes.</li> </ul>	
4	<b>Maintenance of a WP website on the EFC website:</b> WP website is up-to-date : Yes : <input checked="" type="checkbox"/> No : <input type="checkbox"/>  Stefan Ritter is in charge of the WP 4 section on the EFC website (it is always kept up-to-date with plenty of information on past, current and future activities and with links to related groups, projects, publications, etc.). WP 4 also has a feed on the EFC Hub.	
5	<b>Contributions to the EFC Newsletter:</b> Contributions to the December 2023, April 2024 and August/September 2024 Newsletters have been submitted (e.g., advertisement on the 5 <sup>th</sup> WP 4 webinar, the nuclear corrosion session & prizes, 2023 & 2024 Coriou Award winners, etc.). It is intended to submit contributions to all future EFC Newsletters.	

6	<p><u>Organisation of EFC Workshops/Courses/Meetings, etc.</u> (give details):</p> <ul style="list-style-type: none"> <li>• WP 4 is supporting the organisation of the EFC Summer School preceding EUROCORR 2024 by organising a visit of CEA's corrosion labs.</li> <li>• A nuclear corrosion webinar is planned to be held also in 2025 around the Corrosion Awareness Day (6<sup>th</sup> edition).</li> <li>• In 2025 the next edition of the int. workshop on "Long-term Prediction of Corrosion Damage in Nuclear Waste Systems (LTC 2025)" will be co-organised by WP 4.</li> </ul>	<p>09/2024 04/2025 11/2025</p>
7	<p><u>Organisation of collaborative research or testing programmes</u> (give details):</p> <p>Collaborative research (e.g., Round-Robin programmes) is taking place in the framework of EU projects (see below) and in some connected associations/groups (LTC, SNETP/NUGENIA, ECG-COMON, ICG-EAC, etc.).</p>	
8	<p><b>EU projects formulated in your WP (give details):</b></p> <p>In the Nuclear field, the EU programmes are run in the framework of the EURATOM Agreement, based on national representative nuclear institutes. EU funded programs regarding materials and corrosion for reactors are also discussed inside the SNETP/NUGENIA association. Nevertheless, WP 4 supports members to get partners of these programmes and also tries to "lobby" for including the nuclear corrosion thematic inside EU calls for proposals. WP 4 also supports the preparation of project proposals (e.g., the EU Horizon Europe proposals "POEAM": rejected in 2022 and 2024; a Round-Robin is conducted instead) and is in close contact &amp; cooperation with nuclear corrosion-related EU Horizon 2020 projects.</p>	
9	<p><b>Participation in the development of standards (give details):</b></p> <p>Currently none.</p>	
10	<p><u>Preparation of publications for the EFC Series of Books</u> (give details):</p> <p>A new book has been issued in March 2024: No. 71 – Corrosion modelling with cellular automata, edited by D. Féron &amp; D. Di Caprio</p>	<p>03/2024</p>
11	<p><u>Other(s)</u> (please specify):</p> <ul style="list-style-type: none"> <li>• The 2024 EFC WP 4 "Henri Coriou Medal" has been awarded to Prof. Dirk Engelberg (Univ. of Manchester, UK). Also in 2025 the medal will be awarded to an outstanding nuclear corrosion expert or group.</li> <li>• WP 4 best young presenter and poster prize will be awarded during EUROCORR 2024 (and again in 2025).</li> <li>• WP 4 (under the lead of S. Ritter) is one of the administrators of the EFC Hub.</li> <li>• WP 4 has created some income for the EFC (approx. 3200.- €) from their 2023 Summer School (NuCoSS-23). Part of this income should be used for financing prizes for the WP 4 awards.</li> </ul>	<p>06/2024 09/2024</p>
<p><b>Brief summary of activity during the last year:</b></p> <ul style="list-style-type: none"> <li>• 2.25 days nuclear corrosion session during EUROCORR 2023.</li> <li>• Best young presenter &amp; poster presentation prizes awarded during EUROCORR 2023: Giacomo Gregori (SCK CEN, Belgium) &amp; Annesha Das (Paul Scherrer Institute, Switzerland).</li> <li>• An EFC Green Book (No. 71) has been published in March 2024.</li> <li>• A further paper from the EUROCORR 2022 nuclear corrosion session has been published in the Corrosion Reviews journal.</li> <li>• A webinar on nuclear corrosion (5<sup>th</sup> edition) has been held with 62 attendees (April 25, 2024).</li> <li>• "Henri Coriou Medal" Jury has selected Dirk Engelberg (UK) as 2024 recipient.</li> <li>• Planning of the nuclear corrosion &amp; joint sessions for EUROCORR 2024.</li> </ul>		