

**INTERIM MEETING**  
**NATO PROJECT G5233**

*Project title:*

**PORTABLE ENERGY SUPPLY**

**Date and place: 6 September, 2019, Lviv-Shepilske, UKRAINE**

**Participants:**

*Institute for Energy Technologies, Norway:*

Prof. Yartys' V. (NPD)

*Physico-Mechanical Institute NAS of Ukraine:*

Prof. Zavaliy I. (PPD), Dr. Berezovets V.

*Institute for Problems of Materials Science NAS of Ukraine:*

Prof. Solonin Yu. (PCD), Dr. Korablov D.

*Institute of General and Inorganic Chemistry NAS of Ukraine:*

Dr.Sci. Pirskey Yu. (PCD), Dr. Manilevych F.

**Agenda of the meeting:**

Discussion of the terms and working plans for Milestone 2  
NATO Project G5233 "Portable Energy Supply".

**DECISIONS TAKEN AND ACTIONS PLAN FOR THE CONTINUATION OF THE PROJECT:**

1. The work program of the project G5233 PORTABLE ENERGY SUPPLY started December 1<sup>st</sup>, 2017. The project duration was originally approved for 36 months. Execution of the M1 of the project has been delayed because of a late receipt of the equipment ordered for the project during M1.  
Thus, there is a need to prolong project duration for one year, until 1 December 2021, and to shift timing in a completion of the milestones. M2 is planned to be reached on February 29<sup>th</sup>, 2020.  
The revised schedule of the execution of the project has been agreed by the projects co-directors and is presented below.

<b>M1</b>	<b>M2</b>	<b>M3</b>	<b>M4</b>
01.12.2017-31.03.2019	01.04.2019-29.02.2020	01.03.2020-28.02.2021	01.03.2021-01.12.2021

We ask NATO SPS program to approve a revised schedule of the project G5233 and to extend its duration from 36 to 48 months.

2. There is a need in introducing new team members at PhMI NAS Ukraine and at IPM AN Ukraine.  
The meeting approved participation of the following researchers in the project.  
PhMI NAS Ukraine:  
- Dr. Andriy Kytsya (senior researcher)  
- Dr. Ihor Oshchapovskyy (young researcher, date of birth - 21.05.1987).
3. To analyze the equipment and consumable necessity for the fulfillment of the project to form the corrected lists.  
*Main responsible: team leaders; term – 15<sup>th</sup> of October.*

Chairman of the meeting  
NATO Project Director

Prof. V.A. Yartys

On behalf of Ukrainian co-directors

Prof. I.Yu. Zavaliy

#### **4. WORK DIVISION FOR MS-2 AND PREPARATION OF THE REPORT:**

4.1. Novel Mg-based hydride composites with catalytic additions and in Mg materials in non equilibrium micro gradient state

***Deliverables:***

- *New Mg-based composites in micro-gradient state.*

*TERM: 31/12/2019;*

*MAIN RESPONSIBLE: V. Berezovets, D. Korablov*

*PARTICIPANTS: IFE, PhMI, IPMS*

- *Publication of the paper.*

*TERM: First version – 20/10/2019; publication - 12.2019*

*MAIN RESPONSIBLE: Yu. Verbovytskyy, I. Zavaliiy*

*PARTICIPANTS: PhMI + IFE*

4.2. Preparation of novel Al-based alloys (Bi, Sn and other alloying elements), study of influence of ball milling on the reactivity of Al-based materials.

***Deliverables:***

- *New Al-based alloys and composites.*

*TERM: 31/12/2019*

*MAIN RESPONSIBLE: F. Manilevych*

*PARTICIPANTS: IGICH + IFE*

- *Publication of the paper.*

*TERM: DONE*

*MAIN RESPONSIBLE: F. Manilevych*

*PARTICIPANTS: IGICH, IFE*

4.3. Complex hydrides (NaBH<sub>4</sub>) testing as materials for the generation of hydrogen

***Deliverables:***

- *NaBH<sub>4</sub> with catalytic additives, assessment of feasibility.*

*TERM: 31/01/2020*

*MAIN RESPONSIBLE: F. Manilevych, A. Kycia*

*PARTICIPANTS: IGICH, PhMI, IFE*

- *Interim Report*

*TERM: 15 December 2019 – shift to 25 January (if possibly)*

*MAIN RESPONSIBLE: I. Yu. Zavaliiy*

*PARTICIPANTS: V.A. Yartys, Yu.M. Solonin. Yu. Pirskeyy*

**Individual reports**

*Every stipend holder will submit a report approved by the team leader.*

*Term: 30 September 2019*

**Website**

*PhMI / I. Zavaliiy will finalize the website within 20 October 2019.*

*PhMI will request the participants to provide relevant info.*

**Budget**

*Team leaders will provide proposals on budget within 15 October at latest.*

*List of equipment will be revised and justified by price quotations.*

**Training** : Transferred to M3.