FRIEDRICH-SCHILLER-
UNIVERSITÄT
JENA
Physikalisch-Astronomische Fakultät
Institut für Festkörperphysik

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apl. Prof. Dr. Elke Wendler

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To whom it may concern

Jena, 04. Dezember 2019

Certificate

This is to certify that Dr. Iya I. Tashlykova-Bushkevich completed a fellowship as a visiting scientist at the Institute of Solid State Physics in the Ion beam physics group of the Friedrich-Schiller-Universität (FSU) Jena, Germany. The period of the fellowship was from 22 November to 05 December, 2019.

During this fellowship Dr. Tashlykova-Bushkevich gave the presentation entitled "Chromium effect on surface chemical composition and properties of rapidly solidified Al-Cr alloys" at the seminar on 27 November, 2019. In this talk she showed the advantages following from the complementary use of ion beam analysis techniques and synchrotron-based X-ray photoelectron spectroscopy. This combination of techniques provides unique structural and chemical information with submicron spatial resolution in the examination of rapidly solidified Al alloys. Both methods are considered to enable the evaluation of how solute atoms interact with lattice defects at microscopic scale, clarifying the role of solute in H/microstructure interactions in the materials towards H behaviour in Al-based alloys.

Dr. Tashlykova-Bushkevich made extensive use of the possibility to do further experiments in Jena. This included transmission electron microscopy, energy-dispersive X-ray analysis, Rutherford backscattering spectrometry and nuclear reaction analysis. The results will help to obtain further and deeper understanding of processes in rapidly solidified Al alloys as-cast and after annealing.

Elke Wendler

Friedrich-Schiller-Universität Jena
Physikalisch-Astronomische Fakultät
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Helmholtzweg 3
07743 Jena

The Abdus Salam
International Centre
for Theoretical Physics

GENDER GAP
IN SCIENCE

SISSA

Trieste, 8th November 2019

This is to certify that

Iya Igorevna Tashlykova-bushkevich

participated in and completed the

Conference on Global Approach to the Gender Gap in Mathematical, Computing and Natural Sciences: How to Measure It, How to Reduce It?

Co-sponsors:
International Mathematical Union (IMU)
International School for Advanced Studies (SISSA)

held at the Abdus Salam International Centre for Theoretical Physics
(ICTP-Trieste, Italy), date 4 - 8 November 2019

Professor Sandro Scandolo
Scientific Programmes Office

The Abdus Salam
International Centre
for Theoretical Physics

Conference on Global Approach to the Gender Gap in Mathematical, Computing and Natural Sciences: How to Measure It, How to Reduce It?

4 - 8 November 2019

(tel: +39 040 2240318, e-mail: smr3335@ictp.it)

Venue: ICTP Adriatico Guesthouse - Kastler Lecture Hall

In collaboration with the International Mathematical Union (IMU) and the International School for Advanced Studies (SISSA)

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8 November 2019

To Whom It May Concern,

This is to certify that **Iya TASHLYKOVA-BUSHKEVICH** gave a poster presentation titled "*Heuristic learning approaches to reduce gender gap in Natural Science: Belarus case study*" during the **Conference on Global Approach to the Gender Gap in Mathematical, Computing and Natural Sciences: How to Measure It, How to Reduce It?**, which was held at the Abdus Salam International Centre for Theoretical Physics (ICTP), in Trieste, from 4 to 8 November 2019.

Yours sincerely

Monica Ancuta

Conference Secretariat

Белорусский государственный университет

СЕРТИФИКАТ

настоящий сертификат свидетельствует о том, что

Ташлыкова-Бушкевич Ия Игоревна

приняла участие
в образовательной программе повышения квалификации по теме:

«ТЕХНОЛОГИИ ЭВРИСТИЧЕСКОГО ОБУЧЕНИЯ В ВЫСШЕЙ ШКОЛЕ
«МЕТОДИКА ОБУЧЕНИЯ ЧЕРЕЗ ОТКРЫТИЕ:
КАК ОБУЧАТЬ ВСЕХ ПО-РАЗНОМУ, НО ОДИНАКОВО»

72 часа

Ректор А.Д. Король

апрель - сентябрь 2019
Минск

Elettra Sincrotrone Trieste

***Object*: Dr. Iya I. Tashlykova-Bushkevich scientific stay at Elettra.**

Trieste 18 April 2019

To whom it may concern

This is to certify that Dr. Iya I. Tashlykova-Bushkevich has completed the fellowship provided by the EU-funded mobility project MOST (Mobility Scheme for Targeted People-to-People-Contacts) as a visiting researcher at the ESCAmicroscopy beamline of the Elettra Sincrotrone Trieste SCpA synchrotron research center, Italy. The period of this fellowship was 5-18 April, 2019.

During this fellowship Dr. Iya I. Tashlykova-Bushkevich gave the presentation entitled "Hydrogen absorption and microstructure evolution in annealed rapidly solidified Al-Cr alloys" in the main seminar room of Elettra's premises on 15 April, 2019. This presentation has shown the recent advances in the sub-micrometer analysis of local chemical composition and microstructure of rapidly solidified aluminum alloys using synchrotron-based photoelectron spectromicroscopy.

The obtained results have provided a vitally important information on the microstructural features controlling the H absorption in rapidly solidified Al materials. Data collected at the ESCAmicroscopy beamline reveal how solute atoms interact with lattice defects at microscopic scale that is of crucial importance for understanding the H/microstructure interactions in rapidly solidified materials and mechanisms of H embrittlement in high strength aluminum alloys.

Best regards,

Dr. Luca Gregoratti
Coordinator of the Microscopy / Diffraction Beamline groups
Head of the ESCAmicroscopy beamline

Elettra - Sincrotrone Trieste S.C.p.A.

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FRIEDRICH-SCHILLER-
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Otto-Schott-Institut für Materialforschung
Otto Schott Institute of Materials Research

Prof. Dr. Dr. h.c. Markus Rettenmayr
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Jena, 23. November 2017

To whom it may concern

Certificate

This is to certify that Dr. Iya I. Tashlykova-Bushkevich gave the presentation titled "Effect of interactions of solutes, hydrogen and defects on structure and properties of aluminium alloys at rapid solidification" at the seminar on 15 November 2017 at the Otto Schott Institute of Materials Research, Friedrich Schiller University Jena, Germany.

This presentation summarizes recent progress in the original research on hydrogen desorption behavior in rapidly solidified Al alloys with alloying elements of technological interest with emphasis on nanometer-scale microstructural evaluation under heat treatment. The effect of interactions of solutes, hydrogen and defects on structure and properties of aluminum alloys produced at exceptionally high cooling rates is discussed, developing the understanding of hydrogen/microstructure interactions in rapidly solidified materials in order to control hydrogen embrittlement in high strength Al-based materials.

Faithfully,

Prof. Dr. rer. nat. habil. Markus Rettenmayr
Otto-Schott-Institut für Materialforschung
Friedrich-Schiller-Universität Jena
Löbdergraben 32
D-07743 Jena

Professor Markus Rettenmayr

IOP Institute of Physics

UNIVERSITY OF BIRMINGHAM

IUPAP

This is to certify that

Iya Tashlykova-Bushkevich

gave an oral presentation titled

Microstructure and chemical composition effects on hydrogen behavior in rapidly solidified Al-Cr alloys

at

International Conference on Women in Physics

On

16-20 July 2017

at

University of Birmingham
Birmingham, UK

Signed

Conferences Department
Date 16/7/2017

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IOP Institute of Physics

UNIVERSITY OF BIRMINGHAM

IUPAP

This is to certify that

Iya Tashlykova-Bushkevich

presented a poster titled

Gender balance in natural science: a case study of Belarus

at

International Conference on Women in Physics

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Date 16/7/2017

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IOP Institute of Physics

UNIVERSITY OF BIRMINGHAM

IUPAP

This is to certify that

Iya Tashlykova-Bushkevich

attended the

Professional development and leadership workshop

at

International Conference on Women in Physics

On

16-20 July 2017

at

University of Birmingham
Birmingham, UK

Signed

Conferences Department
Date 16/7/2017

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