



ROSATOM



STATE ATOMIC ENERGY CORPORATION «ROSATOM»

## ALEKSANDRA L. SIROTKINA

*Master of Science, Nuclear Power Engineering and Thermal Physics*

*3d Category Design Engineer of “Central Design Bureau of Machine Building”  
(ROSATOM)*

*Post-graduated student of “Peter the Great State Polytechnic University”*



## Education

### *The main education:*

**2008..2012** – St.Petersburg State Polytechnical University, Bachelor of Science, Technical Physics

**2012..2014** – Peter the Great State Polytechnic University, Master of Science, Nuclear Power Engineering and Thermal Physics

**2014..** – Peter the Great State Polytechnic University, Post-graduated student, Nuclear Energy Units

### *Additional education:*

**2013..2015:** «Rosatoms Corporative Academy», courses of effective presentation, leadership; School of fast reactors (Central Institute of Qualification Enhancement); course of TRIS (theory of invention problems solving)

**2015..** – Peter the Great State Polytechnic University, additional qualification: translator in professional area

## Main achievements

**2012** – 3d level prize, Rosenergoatoms Contest “Youth nuclear scientists knowledge to NPP”

**2013** – Winner of Rosatoms Contest “TeMP-2013” (as a head of CDBMB team)

**2013** – Laureate of St.Petersburg State Polytechnical University Prize “The best student in investigation area”

**2014** – Laureate of St.Petersburg Government Grant Contest

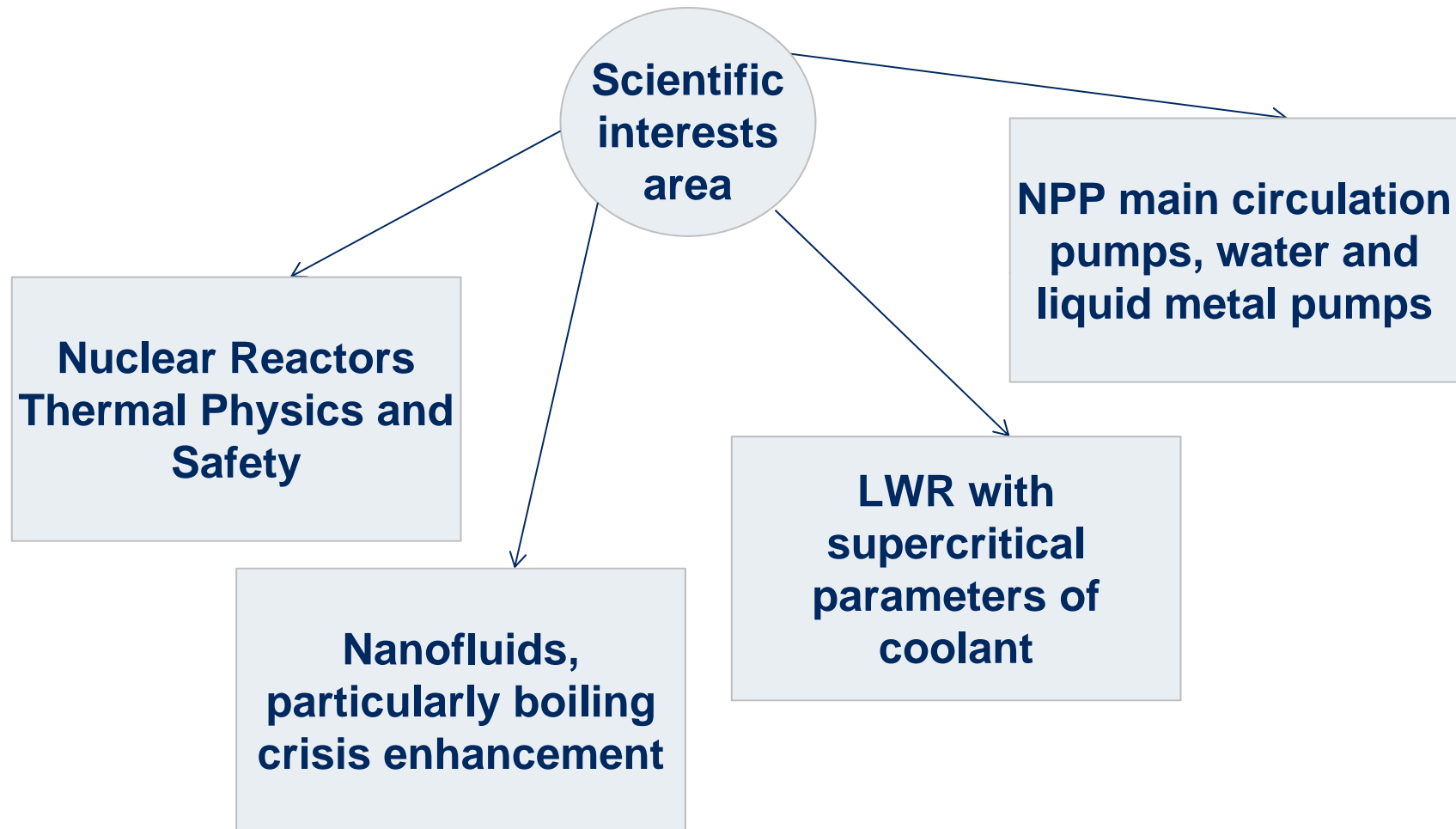
**2015** – Winner of Rosatoms Contest “TeMP-2015” (as an adviser of CDBMB team)

Since 2013: about 10 scientific publications

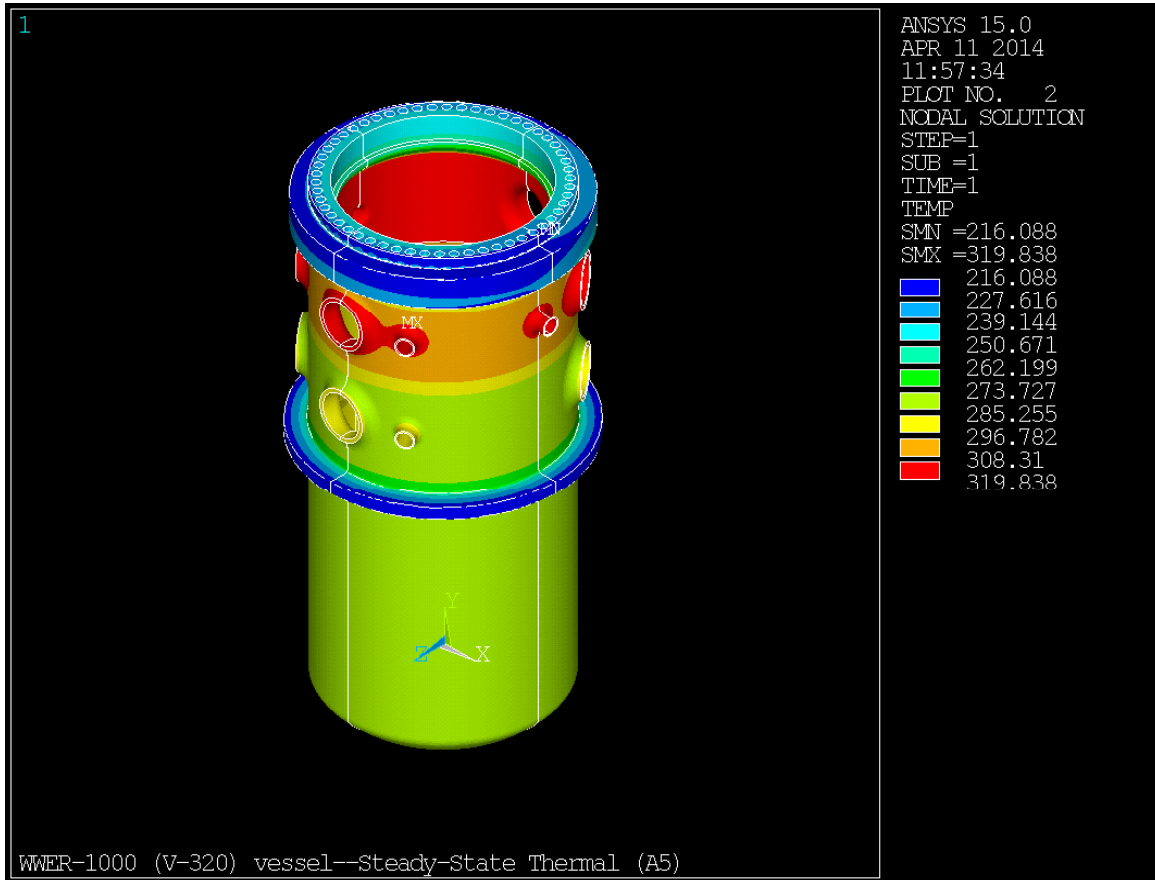
Laureate of Rosatom Scholarship (2013, 2014), Rosenergoatom Scholarship (2013), Russian Government Scholarship (2014).

## Scientific interests

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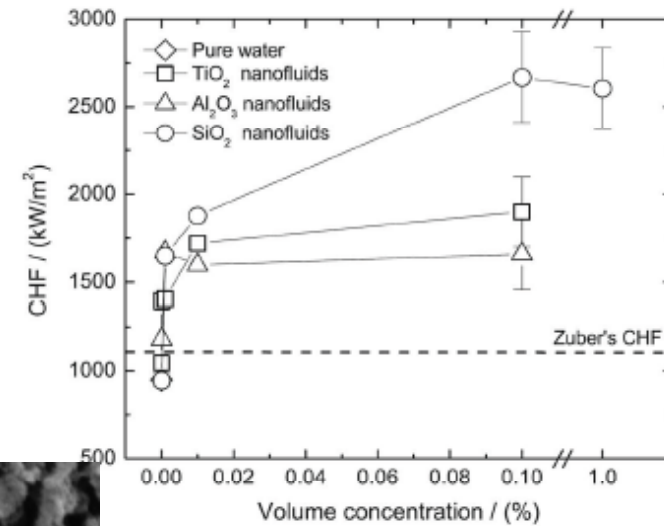
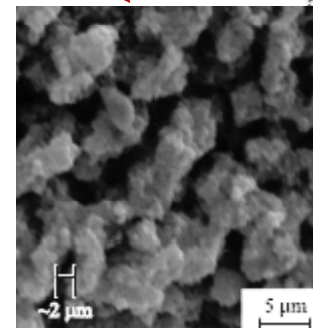
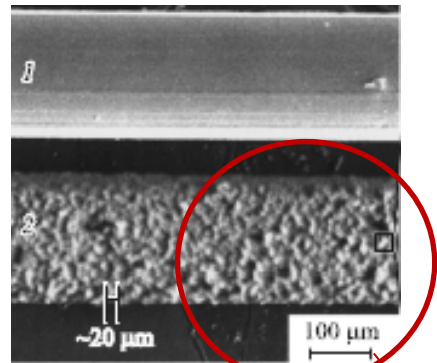


# Nuclear Reactors Thermal Physics and Safety



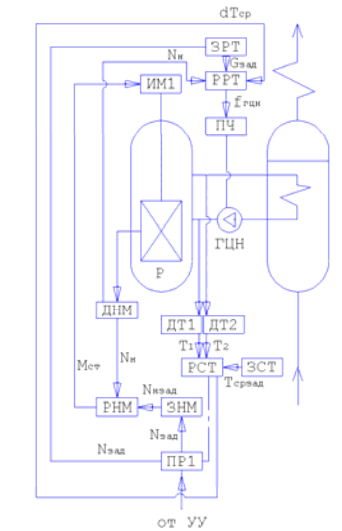
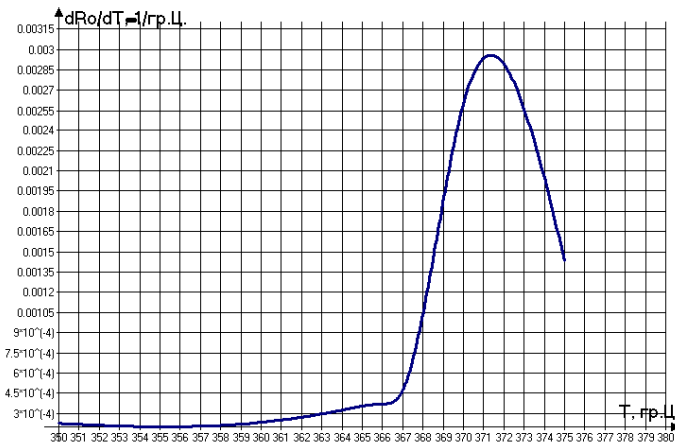
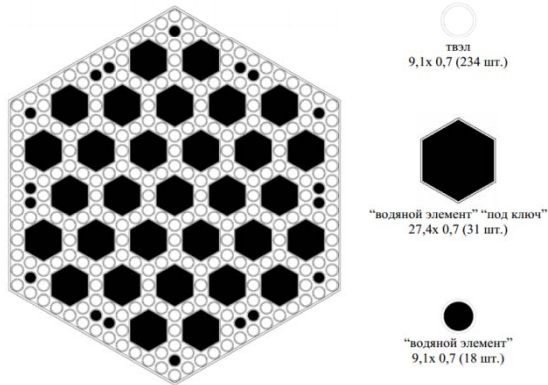
- Analysis of thermal fields during normal operation time and during accidents;
- Thermal stress analysis;
- Using of “ANSYS” CAE;
- Boiling crisis in different circumstances investigation;
- Calculation of safety limits

# Nanofluids



The main goal of my investigation is to find an empirical and theoretical correlations of Critical Heat Flux (CHF).

# LWR with supercritical parameters of coolant



- Special physical features of SCWR;
- System of control;
- Transient calculations;
- Estimation of possibility of using such reactors with variable power level consumption

## Contact information

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**Thank you for your attention!**

### **Contacts:**

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