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| 1. Course title: Chemical Experiments | | | | |
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| 2. Code: | | 3. Type (lecture, practice etc.): laboratory practice | | |
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| 4. Contact hours: 2 hoursper week | | 5. Number of credits (ECTS): 2 | | |
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| 6. Preliminary conditions (max. 3):   * General and Inorganic Cemistry III. laboratory practice | | | | |
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| 7. Announced:fall semester, spring semester, both | | | | |
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| 8. Limit for participants: 8 | | | | |
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| 10. Responsible teacher (faculty, institute and department):  Dr. Petőcz György Faculty of Science, Institute of Chemistry, Department of Inorganic Chemistry | | | | |
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| 11. Teacher(s) and percentage: | | Dr. György Petőcz | | 100 % |
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| 12. Language:English | | | | |
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| 13. Course objectives and/or learning outcomes:  Objectives: The laboratory practice intends to introduce students to the world of spectacular chemical experiments.  Learning outcomes: Based on their previous knowledge and laboratory experience students will be able to run complicated chemical reactions alone and present them to the audience. | | | | |
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| 14. Course outline   1. Laboratory safety – protocols and rules. 2. Code writing in the lab; preparation of sparkler. 3. The reaction of zinc and sulphur; preparation of chemical and friction matches. 4. Experiments with chlorine gas. 5. Barking; sparkling rain; generation of chlorine dioxide and its reactions; experiments with acetylene; preparation of gunpowder 6. Drying-rinsing substance; storm in the test tube; flame thrower with candle-grease; traffic lights; reaction of potassium permanganate with glycerol. 7. BZ-reaction; colour changing solution; elephant toothpaste; glowing fern. 8. The death of gummy bear; melting of test tube; Pharaoh's serpent, black serpent. 9. Thermite reactions; smoke bomb. 10. Brilliance of Tami; flash; 1 drop of water; fire starting with water; volcanic eruption. 11. Pyrophoric iron; melting point of gallium and the Wood's metal; lighting of pencil-sharpener; the silver mirror test. 12. Chemiluminescence; preparation of gun cotton (nitrocellulose). 13. Material flickering out; popping powder; thermal decomposition of lead azide. | | | | |
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| 15. Mid-semester works  Attending lectures is highly recommended. | | | | |
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| 16. Course requirements and grading  Grading is according to the laboratory reports, the introduced experiments and the work activity during the laboratory practices.  During the semester all the work activity (lab practices and tests) will be graded as follows:   * the introduced experiments 35%, * lab reports: 50%, * work activity at the lab practices: 15%   Grades:  0–50% failed  51–65% acceptable  66–75% average  76–90% good  91–100% excellent | | | | |
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| 17. List of readings  Laboratory protocols week by week with detailed descriptions of the experiments | | | | |
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| 18. Recommended texts, further readings | | | | |
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| **Date** | 13 April, 2017 | **Prepared by** |  | |
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| **Endorsed by** | | |  | |
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