Сведения о научном руководителе

По диссертации Волосатовой Анастасии Дмитриевны

«Механизмы радиационно-индуцированного синтеза и эволюции молекул простых нитрилов и их возможная роль в холодных астрохимических превращениях»

Научный руководитель: Фельдман Владимир Исаевич

Учёная степень: доктор химических наук

Учёное звание: профессор

Должность: профессор

Место работы: Химический факультет МГУ им. М.В. Ломоносова, кафедра электрохимии

Адрес места работы: Москва, Ленинские горы, д. 1, стр. 3

Телефон: +7(495)-939-48-70

E-mail: feldman@rad.chem.msu.ru

Список основных научных публикаций по специальности 1.4.4. – физическая химия за последние 5 лет:

1. Volosatova A.D., Tyurin D.A., **Feldman V.I.** The Radiation Chemistry of $NH_3\cdots CO$ Complex in Cryogenic Media as Studied by Matrix Isolation // The Journal of Physical Chemistry A. – 2022. – Т. 126. – №. 24. – С. 3893–3902.
2. Zasimov P.V., Tyurin D.A., Ryazantsev S.V., **Feldman V.I.** Formation and Evolution of $H_2C_3O^{+\bullet}$ Radical Cations: A Computational and Matrix Isolation Study // Journal of the American Chemical Society. – 2022. – Т. 144. – №. 18. – С. 8115–8128.
3. Sosulin I.S., **Feldman V.I.** Spectroscopy and radiation-induced chemistry of an atmospherically relevant $CH_2F_2\cdots H_2O$ complex: Evidence for the formation of $CF_2\cdots H_2O$ complex as revealed by FTIR matrix isolation and ab initio study // Chemosphere. – 2022. – Т. 291. – С. 132967.
4. Zharikov A.A., Vinogradov R.A., Zezina E.A., Pozdnyakov A.S., **Feldman V.I.**, Vasiliev A.L., Zezin A.A. The radiation-induced preparation of ultrasmall gold nanoparticles in Au (III) complexes with units of poly (1-vinyl-1,2,4-triazole) and poly (1-vinyl-1,2,4-triazole)–poly(acrylic acid) // Colloid and Interface Science Communications. – 2022. – Т. 47. – С. 100602.

5. Sosulin I.S., Tyurin D.A., **Feldman V.I.** A hydrogen-bonded CHF···HF complex: IR spectra and unusual photochemistry // The Journal of Chemical Physics. – 2021. – T. 154. – №. 10. – C. 104310.
6. Volosatova A.D., Lukianova M.A., Zasimov P.V., **Feldman V.I.** Direct evidence for a radiation-induced synthesis of acetonitrile and isoacetonitrile from a 1:1 CH_4···HCN complex at cryogenic temperatures: is it a missing link between inorganic and prebiotic astrochemistry? // Physical Chemistry Chemical Physics. – 2021. – T. 23. – №. 34. – C. 18449–18460.
7. Lukianova M.A., **Feldman V.I.** Direct evidence for a single-step radiation-induced assembling of benzene ring from acetylene trimer at cryogenic temperatures // Radiation Physics and Chemistry. – 2021. – T. 183. – C. 109417.
8. **Feldman V.I.**, Ryazantsev S.V., Kameneva S.V. Matrix isolation in laboratory astrochemistry: state-of-the-art, implications and perspective // Russian Chemical Reviews. – 2021. – T. 90. – №. 9. – C. 1142–1165.
9. Zezin A.A., Klimov D.I., Zezina E.A., Mkrtchyan K.V., **Feldman V.I.** Controlled radiation-chemical synthesis of metal polymer nanocomposites in the films of interpolyelectrolyte complexes: Principles, prospects and implications // Radiation Physics and Chemistry. – 2020. – T. 169. – C. 108076.
10. Nesterov S.V., Zakurdaeva O.A., Sokolova N.A., Rychkov P.V., **Feldman V.I.** Radiation-induced macrocycle cleavage in crown ether complexes with Sr (II) and Y (III) chlorides: A comparative study // Radiation Physics and Chemistry. – 2020. – T. 176. – C. 109023.
11. Shiryaeva E.S., Baranova I.A., Tyurin D.A., **Feldman V.I.** Reactions of radiation-induced electrons with carbon dioxide in inert cryogenic films: matrix tuning of the excess electron interactions in solids // Physical Chemistry Chemical Physics. – 2020. – T. 22. – №. 25. – C. 14155–14161.
12. Ryazantsev S.V., Zasimov P.V., **Feldman V.I.** Radiation-induced synthesis of formic acid in the H_2O–CO system: A matrix isolation study // Chemical Physics Letters. – 2020. – T. 753. – C. 137540.
13. Shiryaeva E.S., Baranova I.A., Kiselev G.O., Morozov V.N., Belousov A.V., Sherstiuk A.A., Kolyvanova M.A., Krivoshapkin P.V., **Feldman V.I.** Hafnium oxide as a nanoradiosensitizer under x-ray irradiation of aqueous organic systems: a model study

using the spin-trapping technique and Monte Carlo simulations // The Journal of Physical Chemistry C. – 2019. – Т. 123. – №. 45. – С. 27375–27384.

14. Volosatova A.D., Kameneva S.V., **Feldman V.I.** Formation and interconversion of CCN and CNC radicals resulting from the radiation-induced decomposition of acetonitrile in solid noble gas matrices // Physical Chemistry Chemical Physics. – 2019. – Т. 21. – №. 24. – С. 13014–13021.
15. Ryazantsev S. V., Lundell J., **Feldman V.I.**, Khriachtchev L. Photochemistry of the H_2O/CO system revisited: The HXeOH···CO complex in a xenon matrix // The Journal of Physical Chemistry A. – 2018. – Т. 122. – №. 1. – С. 159–166.

Учёный секретарь
Диссертационного совета МГУ.014.3,
Кандидат химических наук, доцент М.И. Шилина