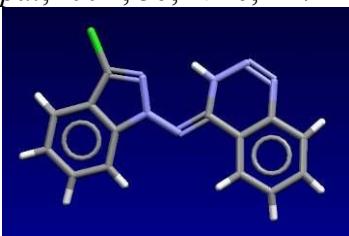
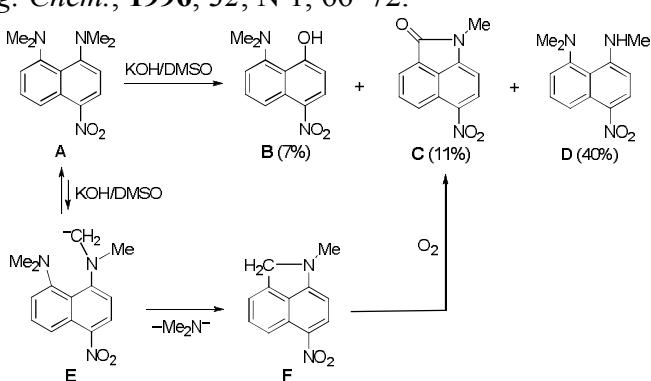
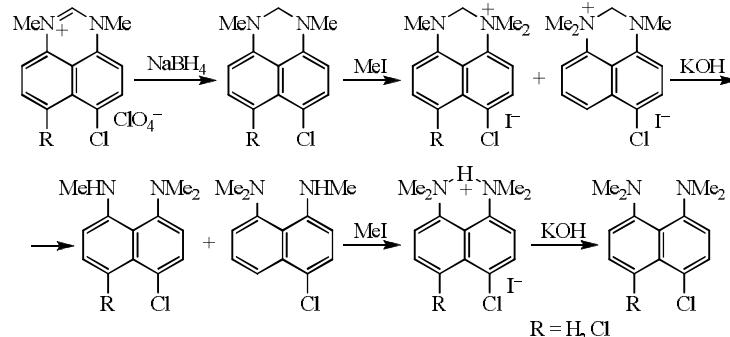
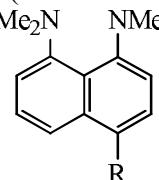
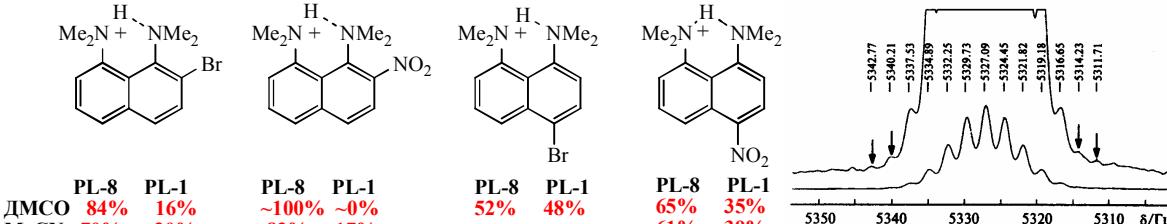
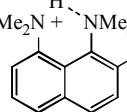
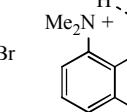
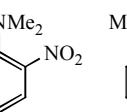
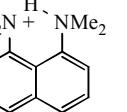
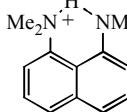
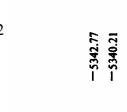
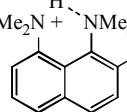
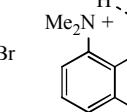
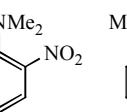
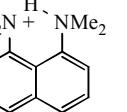
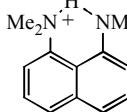
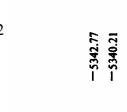
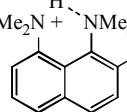
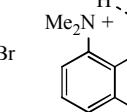
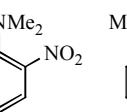
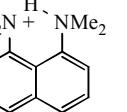
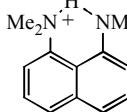
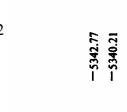
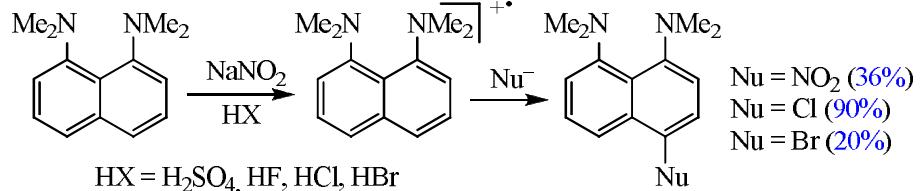


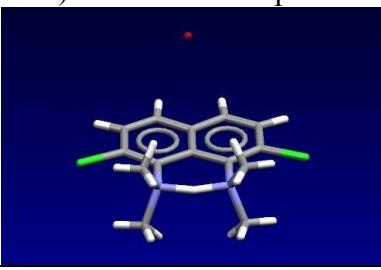
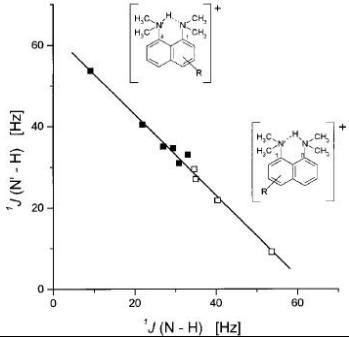
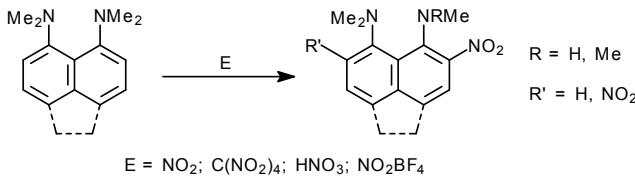
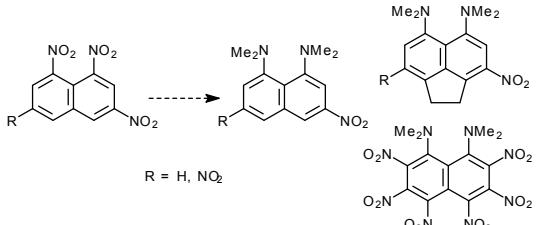
# СПИСОК НАУЧНЫХ ПУБЛИКАЦИЙ

профессора кафедры органической химии ЮФУ В.А. Озерянского

**V.A. Ozeryanskii's list of scientific publications (with graphical abstracts)**

1 (7)	<p>Пожарский А.Ф., Антоненко А.А., Чернышев А.И., Александров Г.Г., Кузьменко В.В., Озерянский В.А. – 3-Галогено-1-аминоиндазолы: необычная реакция окисления в растворе хлороформа – <i>Химия гетероциклических соединений</i>, <b>1994</b>, № 10, 1355–1363.</p> <p>Pozharskii A.F., Antonenko A.A., Chernyshev A.I., Alexandrov G.G., Kuz'menko V.V., Ozeryanskii V.A. – 3-Halogeno-1-aminoindazoles: unusual oxidation reaction in chloroform solution – <i>Chem. Heterocycl. Compd.</i>, <b>1994</b>, 30, N 10, 1174–1181. (doi:10.1007/bf01184880)</p> 
2 (81)	<p>Пожарский А.Ф., Озерянский В.А., Кузьменко В.В. – <i>peri</i>-Нафтилендиамины. 15. Превращения нитропроизводных 1,3-диметилперимидона, 1,1,3- trimethyl-2,3-дигидроперимидиния и 1,8-бис(диметиламино)нафталина под действием щелочи. Синтез N-метилзамещенных 1,8-диамино-4-нитронапthalена и 8-амино-4-нитро-1-нафтола – <i>Журн. орган. химии</i>, <b>1996</b>, 32, № 1, 76–82.</p> <p>Pozharskii A.F., Ozeryanskii V.A., Kuz'menko V.V. – <i>peri</i>-Naphthylenediamines. 15. Transformations of nitro derivatives of 1,3-dimethylperimidone, 1,1,3-trimethyl-2,3-dihydroperimidinium iodide and 1,8-bis(dimethylamino)naphthalene under the action of alkali. Synthesis of N-methylsubstituted 1,8-diamino-4-nitronaphthalene and 8-amino-4-nitro-1-naphthol – <i>Russ. J. Org. Chem.</i>, <b>1996</b>, 32, N 1, 66–72.</p> 
3 (163)	<p>Озерянский В.А., Пожарский А.Ф., Висторобский Н.В. – <i>peri</i>-Нафтилендиамины. 20. Синтез хлорпроизводных 1,8-бис(диметиламино)нафталина. Первый случай региоселективного электрофильного <i>ортого</i>-замещения в "протонной губке" – <i>Журн. орган. химии</i>, <b>1997</b>, 33, № 2, 285–290.</p> <p>Ozeryanskii V.A., Pozharskii A.F., Vistorobskii N.V. – <i>peri</i>-Naphthylenediamines. 20. Synthesis of chloro derivatives of 1,8-bis(dimethylamino)naphthalene: the first case of regioselective electrophilic <i>ortho</i>-substitution in the "proton sponge" – <i>Russ. J. Org. Chem.</i>, <b>1997</b>, 33, N 2, 251–256.</p> 

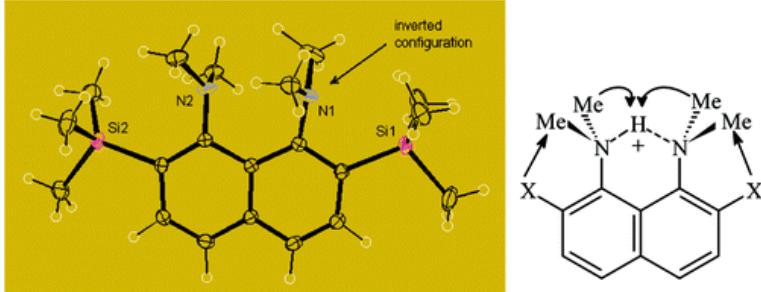
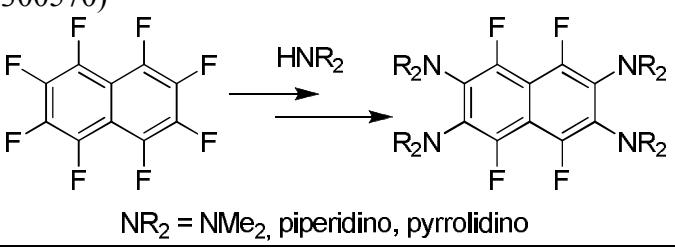
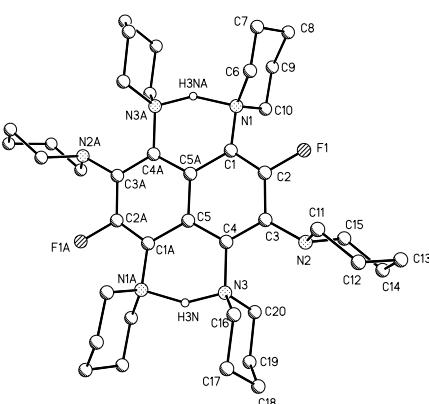
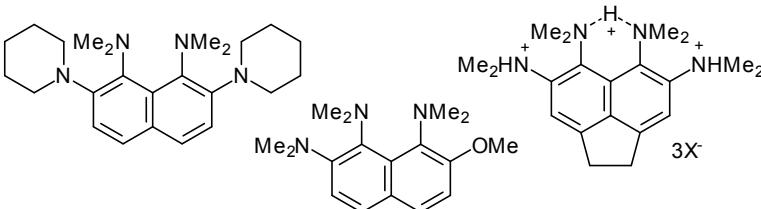
4 (182)	<p>Пожарский А.Ф., Чикина Н.Л., Висторобский Н.В., Озерянский В.А. – <i>peri</i>-Нафтилендиамины. 21. Константы основности некоторых новых производных 1,8-бис(диметиламино)нафталина ("протонной губки") – <i>Журн. орган. химии</i>, 1997, 33, № 12, 1810–1813.</p> <p>Pozharskii A.F., Chikina N.L., Vistorobskii N.V., Ozeryanskii V.A. – <i>peri</i>-Naphthylenediamines. 21. Basicity constants of some new 1,8-bis(dimethylamino)naphthalene ("proton sponge") derivatives – <i>Russ. J. Org. Chem.</i>, 1997, 33, N 12, 1727–1730.</p>					
5 (193)	<p>Озерянский В.А., Пожарский А.Ф. – <i>peri</i>-Нафтилендиамины. 22. Синтез 1,4,5-трис(диметиламино)нафталина и других 4-аминопроизводных "протонной губки" – <i>Изв. АН, Сер. хим.</i>, 1997, № 8, 1501–1504.</p> <p>Ozeryanskii V.A., Pozharskii A.F. – <i>peri</i>-Naphthylenediamines. 22. Synthesis of 1,4,5-tris(dimethylamino)naphthalene and other "proton sponge" 4-amino derivatives – <i>Russ. Chem. Bull.</i>, 1997, 46, N 8, 1437–1440. (doi:10.1007/bf02505681)</p> <p style="text-align: center;">    <math>\begin{array}{c} \text{Me}_2\text{N} &amp; \text{NMe}_2 \\   &amp;   \\ \text{R} &amp; \text{R} \end{array}</math>   <math>\text{R} = \text{NHAc (76\%)} \\ \text{R} = \text{NMe}_2 (87\%) \\ \text{R} = \text{NHMe (93\%)} \\ \text{R} = \text{Br (25\%)}</math> </p>					
6 (194)	<p>Пожарский А.Ф., Озерянский В.А. – <i>peri</i>-Нафтилендиамины. 23. Исследование внутримолекулярной водородной связи в протонированных 1,8-бис(диметиламино)нафталинах методом спектроскопии ЯМР <math>^1\text{H}</math> – <i>Изв. АН, Сер. хим.</i>, 1998, № 1, 68–75.</p> <p>Pozharskii A.F., Ozeryanskii V.A. – <i>peri</i>-Naphthylenediamines. 23. Investigation of the intramolecular hydrogen bond in protonated 1,8-bis(dimethylamino)naphthalenes by <math>^1\text{H}</math> NMR spectroscopy – <i>Russ. Chem. Bull.</i>, 1998, 47, N 1, 66–73. (doi:10.1007/bf02495511)</p> <p style="text-align: center;">    <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">   PL-8 ДМСО 84% MeCN 70%         </td> <td style="text-align: center;">   PL-1 16% 30%         </td> <td style="text-align: center;">   PL-8 ~100% 83%         </td> <td style="text-align: center;">   PL-1 ~0% 17%         </td> <td style="text-align: center;">   PL-8 52% --- PL-1 48% ---     PL-8 65% 61% PL-1 35% 39%         </td> </tr> </table> </p>	 PL-8 ДМСО 84% MeCN 70%	 PL-1 16% 30%	 PL-8 ~100% 83%	 PL-1 ~0% 17%	 PL-8 52% --- PL-1 48% ---   PL-8 65% 61% PL-1 35% 39%
 PL-8 ДМСО 84% MeCN 70%	 PL-1 16% 30%	 PL-8 ~100% 83%	 PL-1 ~0% 17%	 PL-8 52% --- PL-1 48% ---   PL-8 65% 61% PL-1 35% 39%		
7 (196)	<p>Озерянский В.А., Пожарский А.Ф., Фомченков А.М. – <i>peri</i>-Нафтилендиамины. 25. Свидетельство участия катион-радикала 1,8-бис(диметиламино)нафталина ("протонной губки") в его реакциях с нитрующими агентами. Образование 1,1'-бинафтильной "протонной губки" и региоселективный синтез 1,8-бис(диметиламино)-4-хлорнафталина – <i>Изв. АН, Сер. хим.</i>, 1998, № 2, 320–324.</p> <p>Ozeryanskii V.A., Pozharskii A.F., Fomchenkov A.M. – <i>peri</i>-Naphthylenediamines. 25. An evidence for the participation of the radical cation of 1,8-bis(dimethylamino)naphthalene ("proton sponge") in its reactions with nitrating agents. The formation of 1,1'-binaphthyl "proton sponge" and the regioselective synthesis of 4-chloro-1,8-bis(dimethylamino)naphthalene – <i>Russ. Chem. Bull.</i>, 1998, 47, N 2, 313–317. (doi:10.1007/bf02498957)</p> <p style="text-align: center;">    <math>\text{Me}_2\text{N}-\text{NMe}_2</math> <math>\xrightarrow[\text{HX}]{\text{NaNO}_2}</math> <math>\text{Me}_2\text{N}-\text{NMe}_2\dot{+}</math> <math>\xrightarrow{\text{Nu}^-}</math> <math>\text{Me}_2\text{N}-\text{NMe}_2-\text{Nu}</math>   <math>\text{Nu} = \text{NO}_2 (36\%)</math>  <math>\text{Nu} = \text{Cl (90\%)}</math>  <math>\text{Nu} = \text{Br (20\%)}</math>   <math>\text{HX} = \text{H}_2\text{SO}_4, \text{HF}, \text{HCl}, \text{HBr}</math> </p>					

8 (342)	Glowiak T., Majerz I., Malarski Z., Sobczyk L., Pozharskii A.F., Ozeryanskii V.A., Grech E. – Structure and IR spectroscopic behaviour of 2,7-dichloro-1,8-bis(dimethylamino)naphthalene and its protonated form – <i>J. Phys. Org. Chem.</i> , <b>1999</b> , <i>12</i> , N 12, 895–900. (doi:10.1002/(sici)1099-1395(199912)12:12<895::aid-poc208>3.3.co;2-4)	
9 (351)	Pietrzak M., Stefaniak L., Pozharskii A.F., Ozeryanskii V.A., Nowicka-Scheibe J., Grech E., Webb G.A. – A <sup>1</sup> H, <sup>13</sup> C and <sup>15</sup> N NMR investigation of three substituted DMAN derivatives and their monoprotonated salts – <i>J. Phys. Org. Chem.</i> , <b>2000</b> , <i>13</i> , N 1, 35–38. (doi:10.1002/(sici)1099-1395(200001)13:1<35::aid-poc202>3.0.co;2-n)	
10 (366)	Озерянский В.А., Пожарский А.Ф., Висторобский Н.В. – <i>peri</i> -Нафтилендиамины. 28. Нитрование 1,8-бис(диметиламино)нафталина и 5,6-бис(диметиламино)аценафтенена в нейтральной и слабокислой среде. Первый случай выделения <i>o</i> -нитро- и <i>o,o'</i> -динитропроизводных "протонных губок" – <i>Изв. АН, Сер. хим.</i> , <b>2000</b> , № 7, 1215–1220. Ozeryanskii V.A., Pozharskii A.F., Vistorobskii N.V. – <i>peri</i> -Naphthylenediamines. 28. Nitration of 1,8-bis(dimethylamino)naphthalene and 5,6-bis(dimethylamino)acenaphthene in neutral and weakly acidic media. The first case of isolation of <i>o</i> -nitro and <i>o,o'</i> -dinitro derivatives of "proton sponges" – <i>Russ. Chem. Bull.</i> , <b>2000</b> , <i>49</i> , N 7, 1212–1217. (doi:10.1007/bf02495763)	
11 (367)	Озерянский В.А., Пожарский А.Ф. – <i>peri</i> -Нафтилендиамины. 29. 1,8-Бис(диметиламино)-3-нитро- и -3,6-динитронапфталины и 5,6-бис(диметиламино)-3-нитро- и -3,8-динитроаценафтены – первые представители "протонных губок" с <i>мета</i> -заместителями относительно NMe <sub>2</sub> -групп – <i>Изв. АН, Сер. хим.</i> , <b>2000</b> , № 8, 1405–1411. Ozeryanskii V.A., Pozharskii A.F. – <i>peri</i> -Naphthylenediamines. 29. 1,8-Bis(dimethylamino)-3-nitro- and -3,6-dinitronaphthalenes and 5,6-bis(dimethylamino)-3-nitro- and -3,8-dinitroacenaphthenes as the first representatives of "proton sponges" <i>meta</i> -substituted relative to NMe <sub>2</sub> groups – <i>Russ. Chem. Bull.</i> , <b>2000</b> , <i>49</i> , N 8, 1399–1405. (doi:10.1007/bf02495086)	

12 (368)	<p>Озерянский В.А., Пожарский А.Ф. – <i>peri</i>-Нафтилендиамины. 30. 1,2,8-Трис(диметиламино)нафталин и некоторые другие 2-аминопроизводные "протонной губки" – <i>Изв. АН, Сер. хим.</i>, <b>2000</b>, № 8, 1412–1414. Ozeryanskii V.A., Pozharskii A.F. – <i>peri</i>-Naphthylenediamines. 30. 1,2,8-Tris(dimethylamino)naphthalene and some other 2-amino derivatives of "proton sponge" – <i>Russ. Chem. Bull.</i>, <b>2000</b>, 49, N 8, 1406–1408. (doi:10.1007/bf02495087)</p>
13 (369)	<p>Ozeryanskii V.A., Pozharskii A.F., Milgizina G.R., Howard S.T. – Synthesis and properties of 5,6-bis(dimethylamino)acenaphthylene: the first proton sponge with easily-modified basicity – <i>J. Org. Chem.</i>, <b>2000</b>, 65, N 22, 7707–7709. (doi:10.1021/jo001171p)</p>
14 (406)	<p>Озерянский В.А., Филатова Е.А., Сорокин В.И., Пожарский А.Ф. – <i>peri</i>-Нафтилендиамины. 31. Исследование взаимных переходов между 2,3-дигидроперимидинами и 1,8-бис(дialкиламино)нафталинами. Удобный метод синтеза 1,2,2,3-тетраметил-2,3-дигидроперимидина и моноизопропильного аналога "протонной губки" – <i>Изв. АН, Сер. хим.</i>, <b>2001</b>, № 5, 809–816. Ozeryanskii V.A., Filatova E.A., Sorokin V.I., Pozharskii A.F. – <i>peri</i>-Naphthylenediamines. 31. Study of interconversions of 2,3-dihydroperimidines and 1,8-bis(dialkylamino)naphthalenes. Convenient synthesis of 1,2,2,3-tetramethyl-2,3-dihydroperimidine and a monoisopropyl analogue of the "proton sponge" – <i>Russ. Chem. Bull.</i>, <b>2001</b>, 50, N 5, 846–853. (doi:10.1023/a:1011359109826)</p>
15 (407)	<p>Рябцова О.В., Пожарский А.Ф., Озерянский В.А., Висторобский Н.В. – <i>peri</i>-Нафтилендиамины. 32. Взаимодействие 4,5-бис(диметиламино)-1-нафтиллития и 4,5-бис(диметиламино)-1-нафтилмагнийбромида с электрофильными агентами. Новые представители двойных нафталиновых "протонных губок" со структурой 1,1'-динафтилкетона и 1,1'-динафтилметанола – <i>Изв. АН, Сер. хим.</i>, <b>2001</b>, № 5, 817–822. Ryabtsova O.V., Pozharskii A.F., Ozeryanskii V.A., Vistorobskii N.V. – <i>peri</i>-Naphthylenediamines. 32. Reactions of 4,5-bis(dimethylamino)-1-naphthyllithium and 4,5-bis(dimethylamino)-1-naphthylmagnesium bromide with electrophilic agents. New representatives of double naphthalene "proton sponges" with the structures of 1,1'-binaphthyl ketone and 1,1'-binaphthylmethanol – <i>Russ. Chem. Bull.</i>, <b>2001</b>, 50, N 5, 854–859. (doi:10.1023/a:1011311226664)</p>

16 (418)	Pozharskii A.F., Ozeryanskii V.A., Starikova Z.A. – Molecular structure of 5,6-bis(dimethylamino)acenaphthene, 5,6-bis(dimethylamino)acenaphthylene, and their monohydrobromides: a comparison with some naphthalene proton sponges – <i>J. Chem. Soc., Perkin Trans. 2</i> , <b>2002</b> , N 2, 318–322. (doi:10.1039/b106725g)
17 (423)	Ozeryanskii V.A., Pozharskii A.F., Glowiacz T., Majerz I., Sobczyk L., Grech E., Nowicka-Scheibe J. – X-ray diffraction and IR-spectroscopic studies on protonated 4-amino-1,8-bis(dimethylamino)naphthalene – <i>J. Mol. Struct.</i> , <b>2002</b> , 607, N 1, 1–8. (doi:10.1016/s0022-2860(01)00887-0)
18 (452)	Сорокин В.И., Озерянский В.А., Пожарский А.Ф. – <i>peri</i> -Нафтилендиамины. 34. 1,4,5,8-Тетракис(диметиламино)нафталин: альтернативные подходы к синтезу – <i>Журн. орган. химии</i> , <b>2002</b> , 38, № 5, 737–746. Sorokin V.I., Ozeryanskii V.A., Pozharskii A.F. – <i>peri</i> -Naphthylenediamines. 34. 1,4,5,8-Tetrakis(dimethylamino)naphthalene: alternative approaches to synthesis – <i>Russ. J. Org. Chem.</i> , <b>2002</b> , 38, N 5, 699–708. (doi:10.1023/a:1019615206870)
19 (493)	Grech E., Klimkiewicz J., Nowicka-Scheibe J., Pietrzak M., Schilf W., Pozharski A.F., Ozeryanskii V.A., Bolvig S., Abildgaard J., Hansen P.E. – Deuterium isotope effects on <sup>15</sup> N, <sup>13</sup> C and <sup>1</sup> H chemical shifts of proton sponges – <i>J. Mol. Struct.</i> , <b>2002</b> , 615, N 1–3, 121–140. (doi:10.1016/s0022-2860(02)00216-8)

20 (496)	<p>Пожарский А.Ф., Озерянский В.А., Висторобский Н.В. – <i>peri</i>-Нафтилендиамины. 36. 5,6-Бис(диметиламино)аценафтилен в реакциях [4+2]-циклоприсоединения. Синтез и особенности протонирования "протонных губок" со структурой 8,9-диазафлуорантена – <i>Изв. АН, Сер. хим.</i>, 2003, № 1, 206–215.</p> <p>Pozharskii A.F., Ozeryanskii V.A., Vistorobskii N.V. – <i>peri</i>-Naphthylenediamines. 36. 5,6-Bis(dimethylamino)acenaphthylene in [4+2]-cycloaddition reactions. Synthesis and characteristic features of protonation of "proton sponges" with the 8,9-diazafluoranthene structure – <i>Russ. Chem. Bull.</i>, 2003, 52, N 1, 218–227. (doi:10.1023/a:1022429322461)</p>
21 (497)	<p>Озерянский В.А., Пожарский А.Ф. – <i>peri</i>-Нафтилендиамины. 37. Синтез <i>N,N'</i>-дизопропил-<i>N,N'</i>-диметил-1,8-диаминонафталина – <i>Изв. АН, Сер. хим.</i>, 2003, № 1, 257–259.</p> <p>Ozeryanskii V.A., Pozharskii A.F. – <i>peri</i>-Naphthylenediamines. 37. Synthesis of <i>N,N'</i>-diisopropyl-<i>N,N'</i>-dimethyl-1,8-diaminonaphthalene – <i>Russ. Chem. Bull.</i>, 2003, 52, N 1, 271–272. (doi:10.1023/a:1022449827004)</p>
22 (498)	<p>Sorokin V.I., Ozeryanskii V.A., Pozharskii A.F. – A simple and effective procedure for the <i>N</i>-permethylation of amino-substituted naphthalenes – <i>Eur. J. Org. Chem.</i>, 2003, N 3, 496–498. (doi:10.1002/ejoc.200390085)</p> <p style="text-align: center;"><math>n = 1-4; \quad R, R' = H, OMe, Hal, NR_2, NO_2 \quad 52-92\%</math></p>
23 (513)	<p>Bieńko A.J., Latajka Z., Sawka-Dobrowolska W., Sobczyk L., Ozeryanskii V.A., Pozharskii A.F., Grech E., Nowicka-Scheibe J. – Low barrier hydrogen bond in protonated proton sponge. X-ray diffraction, infrared, and theoretical <i>ab initio</i> and density functional theory studies – <i>J. Chem. Phys.</i>, 2003, 119, N 8, 4313–4319. (doi:10.1063/1.1594171)</p>

24 (517)	<p>Pozharskii A.F., Ryabtsova O.V., Ozeryanskii V.A., Degtyarev A.V., Kazheva O.N., Alexandrov G.G., Dyachenko O.A. – Organometallic synthesis, molecular structure and coloration of 2,7-disubstituted 1,8-bis(dimethylamino)naphthalenes. How significant is the influence of "buttressing effect" on their basicity? – <i>J. Org. Chem.</i>, <b>2003</b>, <i>68</i>, N 26, 10109–10122. (doi:10.1021/jo035350t)</p> 
25 (519)	<p>Sorokin V.I., Ozeryanskii V.A., Pozharskii A.F. – Exclusive <math>\beta</math>-substitution in the reaction of octafluoronaphthalene with secondary amines – <i>Eur. J. Org. Chem.</i>, <b>2004</b>, N 4, 766–769. (doi:10.1002/ejoc.200300570)</p>  <p style="text-align: center;"><math>\text{NR}_2 = \text{NMe}_2, \text{piperidino, pyrrolidino}</math></p>
26 (533)	<p>Sorokin V.I., Ozeryanskii V.A., Pozharskii A.F., Starikova Z.A. – Hexa- and heptasubstitution in the interaction of octafluoronaphthalene with lithium dialkylamides: a new approach to the naphthalene "proton sponges" – <i>Mendeleev Commun.</i>, <b>2004</b>, <i>14</i>, N 1, 14–16. (doi:10.1070/mc2004v014n01abeh001852)</p>  <p>The reaction of octafluoronaphthalene with lithium dimethylamide, pyrrolidine and piperidine was performed to synthesise polykis(dialkylamino)naphthalenes with up to seven dialkylamino groups as new strongly basic naphthalene 'proton sponges'.</p>
27 (534)	<p>Озерянский В.А., Сорокин В.И., Пожарский А.Ф. – <i>пери</i>-Нафтилендиамины. 38. Нафтиловые и аценафтеновые "протонные губки" с +M-заместителями в <i>ортоположениях</i> к <i>peri</i>-диметиламиногруппам – <i>Изв. АН, Сер. хим.</i>, <b>2004</b>, № 2, 388–397. Ozeryanskii V.A., Sorokin V.I., Pozharskii A.F. – <i>peri</i>-Naphthylenediamines. 38. Naphthalene and acenaphthene "proton sponges" with +M substituents in <i>ortho</i> positions with respect to <i>peri</i>-dimethylamino groups – <i>Russ. Chem. Bull.</i>, <b>2004</b>, <i>53</i>, N 2, 404–414. (doi:10.1023/b:rucb.0000030818.70534.6b)</p> 

28 (625)	Ozeryanskii V.A., Pozharskii A.F., Bieńko A.J., Sawka-Dobrowolska W., Sobczyk L. – [NHN] <sup>+</sup> Hydrogen bonding in protonated 1,8-bis(dimethylamino)-2,7-dimethoxynaphthalene. X-ray diffraction, infrared, and theoretical <i>ab initio</i> and DFT studies – <i>J. Phys. Chem. A</i> , <b>2005</b> , 109, N 8, 1637–1642. (doi:10.1021/jp040618l)
29 (626)	Ozeryanskii V.A., Pozharskii A.F., Koroleva M.G., Shevchuk D.A., Kazheva O.N., Chekhlov A.N., Shilov G.V., Dyachenko O.A. – <i>N,N,N'-Trialkyl-1,8-diaminonaphthalenes: convenient method of preparation from protonated proton sponges and the first X-ray information</i> – <i>Tetrahedron</i> , <b>2005</b> , 61, N 17, 4221–4232. (doi:10.1016/j.tet.2005.02.067)
30 (627)	Pozharskii A.F., Ryabtsova O.V., Ozeryanskii V.A., Degtyarev A.V., Starikova Z.A., Sobczyk L., Filarowski A. – 2- $\alpha$ -Hydroxybenzhydryl- and 2,7-di( $\alpha$ -hydroxybenzhydryl)-1,8-bis(dimethylamino)naphthalenes: the first examples of stabilization of in/out proton sponge conformers by intramolecular hydrogen bonding. The most flattened amino group ever participating in IHB – <i>Tetrahedron Lett.</i> , <b>2005</b> , 46, N 23, 3973–3976. (doi:10.1016/j.tetlet.2005.04.045)
31 (715)	Кажева О.Н., Шилов Г.В., Дьяченко О.А., Мех М.А., Сорокин В.И., Озерянский В.А., Пожарский А.Ф. – 1-Диметиламино-2,7-диметокси-8-метиламино-3,5-динитронапталин и 1,2,4-трибром-6-диметиламино-5-метиламиноаценафтилен: первые примеры сжатия/растяжения N–H...N водородной связи в нейтральных 1,8-диаминонафталинах – <i>Изв. AH, Сер. хим.</i> , <b>2005</b> , № 11, 2414–2417. Kazheva O.N., Shilov G.V., Dyachenko O.A., Mekh M.A., Sorokin V.I., Ozeryanskii V.A., Pozharskii A.F. – 1-Dimethylamino-2,7-dimethoxy-8-methylamino-3,5-dinitronaphthalene and 1,2,4-tribromo-6-dimethylamino-5-methylaminoacenaphthylene: first examples of N–H...N hydrogen bond contraction/expansion in neutral 1,8-diaminonaphthalenes – <i>Russ. Chem. Bull.</i> , <b>2005</b> , 54, N 11, 2492–2495. (doi:10.1007/s11172-006-0145-y)

32 (714)	Ozeryanskii V.A., Pozharskii A.F., Schilf W., Kamieński B., Sawka-Dobrowolska W., Sobczyk L., Grech E. – Novel polyfunctional tautomeric systems containing salicylideneamino and proton sponge moieties – <i>Eur. J. Org. Chem.</i> , <b>2006</b> , N 3, 782–790. (doi:10.1002/ejoc.200500574)
	<p>A <math>\rightleftharpoons</math> B <math>\rightleftharpoons</math> C</p>
33 (716)	Ozeryanskii V.A., Milov A.A., Minkin V.I., Pozharskii A.F. – 1,8-Bis(dimethylamino)naphthalene 2,7-diolate: a simple arylamine nitrogen base with hydride-ion-comparable proton affinity – <i>Angew. Chem., Int. Ed.</i> , <b>2006</b> , 45, N 9, 1453–1456 (doi:10.1002/anie.200503472); <i>Angew. Chem.</i> , <b>2006</b> , 118, N 9, 1481–1484. (doi:10.1002/ange.200503472)
	<p>1 <math>\xrightarrow{+H^+}</math> 2</p> <p><math>pK_a \approx 25.5</math></p> <p><math>PA(\text{Gas}) = 424.8 \text{ kcal mol}^{-1}</math>  <math>PA(\text{DMSO}) = 321.4 \text{ kcal mol}^{-1}</math></p>
	<p><b>The strongest nitrogen base</b> is 1,8-bis(dimethylamino)naphthalene-2,7-diolate according to experimental data and DFT calculations. Its proton affinity (PA) is comparable to those of simple ions such as <math>\text{OH}^-</math>, <math>\text{NH}_2^-</math>, and <math>\text{H}^-</math>. The diaminonaphthalene diolate <b>2</b> is protonated at the neutral amino groups with extremely high gas-phase and solution proton affinity to form highly stable H-bonded conjugate acid <b>1</b>. DMSO=dimethyl sulfoxide.</p>
34 (717)	<p>Озерянский В.А., Пожарский А.Ф. – Способ установления строения внутримолекулярной водородной связи в катионах несимметрично замещенных 1,8-бис(диметиламино)нафталинов в растворе – <i>Изв. AH, Сер. хим.</i>, <b>2006</b>, № 1, 159–162.</p> <p>Ozeryanskii V.A., Pozharskii A.F. – A method for determination of the structure of the intramolecular hydrogen bond in the cations of unsymmetrically substituted 1,8-bis(dimethylamino)naphthalenes in solution – <i>Russ. Chem. Bull.</i>, <b>2006</b>, 55, N 1, 164–167. (doi:10.1007/s11172-006-0231-1)</p>
	<p><math>R = \text{NO}_2, \text{NH}_2, \text{NH}_3^+</math></p>
35 (724)	Sorokin V.I., Ozeryanskii V.A., Borodkin G.S. – A new route to polykis(dialkylamino)benzenes and -naphthalenes based on protodefluorination of electron-rich fluoroaromatics: anion radicals of arenes as a simple and effective alternative to 'classical' LAH-based systems – <i>Synthesis</i> , <b>2006</b> , N 1, 97–102. (doi:10.1055/s-2005-921755)

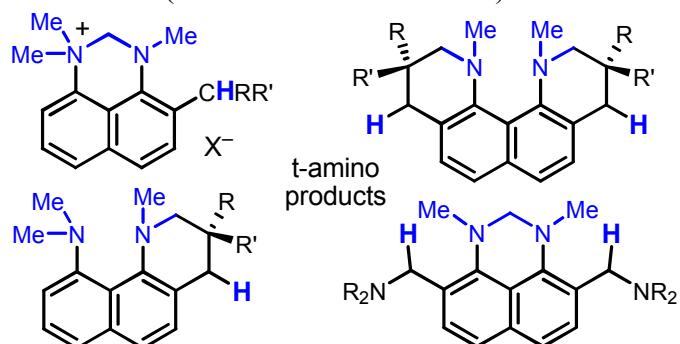
36 (732)	<p>Mekh M.A., Ozeryanskii V.A., Pozharskii A.F. – 5,6-Bis(dimethylamino)acenaphthylene as an activated alkene and 'proton sponge' in halogenation reactions – <i>Tetrahedron</i>, <b>2006</b>, <i>62</i>, N 52, 12288–12296. (doi:10.1016/j.tet.2006.10.008)</p>
37 (733)	<p>Ryabtsova O.V., Pozharskii A.F., Degtyarev A.V., Ozeryanskii V.A. – Rearrangement of carbocations derived from 1,8-bis(dimethylamino)naphthyl-2-methanols into 4-R-1,1,3-trimethyl-2,3-dihydroperimidinium salts – <i>Mendeleev Commun.</i>, <b>2006</b>, <i>16</i>, N 6, 313–316. (doi:10.1070/mc2006v016n06abeh002399)</p> <p><math>\alpha</math>-Phenylated 1,8-bis(dimethylamino)-2-naphthylmethyl carbocations have been shown to rearrange into 4-R-1,1,3-trimethyl-2,3-dihydroperimidinium cations through an intramolecular hydride shift from the 1-NMe<sub>2</sub> group.</p>
38 (737)	<p>Sorokin V.I., Ozeryanskii V.A., Borodkin G.S., Chernyshev A.V., Muir M., Baker J. – Preparation of dialkylamino-substituted benzenes and naphthalenes by nucleophilic replacement of fluorine in the corresponding perfluoroaromatic compounds – <i>Z. Naturforsch., B: Chem. Sci.</i>, <b>2006</b>, <i>61</i>, N 5, 615–625.</p>
39 (791)	<p>Pozharskii A.F., Ozeryanskii V.A., <i>Proton sponges</i>. In: Patai Series: The Chemistry of Functional Groups (Ed. Z. Rappoport), <i>The Chemistry of Anilines</i>, John Wiley &amp; Sons, Ltd., Chichester, <b>2007</b>, Part 2, Chapter 17, p. 931–1026. (doi:10.1002/9780470682531.pat0399) (review)</p>

40 (738)	Pozharskii A.F., Degtyarev A.V., Ryabtsova O.V., Ozeryanskii V.A., Kletskii M.E., Starikova Z.A., Sobczyk L., Filarowski A. – 2- $\alpha$ -Hydroxyalkyl- and 2,7-di( $\alpha$ -hydroxyalkyl)-1,8-bis(dimethylamino)naphthalenes: stabilization of nonconventional in/out conformers of "proton sponges" via N $\cdots$ H–O intramolecular hydrogen bonding. A remarkable kind of tandem nitrogen inversion – <i>J. Org. Chem.</i> , <b>2007</b> , 72, N 8, 3006–3019. (doi:10.1021/jo062667v)									
	<p style="text-align: center;"><i>in/in</i>                            <i>in/out</i> R = H, Me, Ph                    R<sup>1</sup>, R<sup>2</sup> = Me, Ph  <i>in/out</i>                            <i>out/in</i> R<sup>1</sup>, R<sup>2</sup> = Me, Ph</p>									
41 (792)	Chmielewski P., Ozeryanskii V.A., Sobczyk L., Pozharskii A.F. – Primary $^1\text{H}/^2\text{H}$ isotope effect in the NMR chemical shift of $\text{HClO}_4$ salts of 1,8-bis(dimethylamino)naphthalene derivatives – <i>J. Phys. Org. Chem.</i> , <b>2007</b> , 20, N 9, 643–648. (doi:10.1002/poc.1219)									
	The primary isotope effect $\Delta\delta(^1\text{H}, ^2\text{H})$ in NMR spectra of protonated proton sponges with buttressing substituents is analyzed in connection with the potential energy curve for proton/deuteron motion.									
42 (793)	Degtyarev A.V., Ryabtsova O.V., Pozharskii A.F., Ozeryanskii V.A., Starikova Z.A., Sobczyk L., Filarowski A. – 2,7-Disubstituted proton sponges as borderline systems for investigating barrier-free intramolecular hydrogen bonds. Protonated 2,7-bis(trimethylsilyl)- and 2,7-di(hydroxymethyl)-1,8-bis(dimethylamino)naphthalenes – <i>Tetrahedron</i> , <b>2008</b> , 64, N 27, 6209–6214. (doi:10.1016/j.tet.2008.05.001)									
	<table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th style="text-align: right;"><i>T/K</i></th> <th style="text-align: right;"><i>r(N...N), Å</i></th> </tr> </thead> <tbody> <tr> <td>293</td> <td style="text-align: right;">2.530</td> <td></td> </tr> <tr> <td>163</td> <td style="text-align: right;">2.524</td> <td></td> </tr> </tbody> </table>		<i>T/K</i>	<i>r(N...N), Å</i>	293	2.530		163	2.524	
	<i>T/K</i>	<i>r(N...N), Å</i>								
293	2.530									
163	2.524									
	The experimental evidence of the shortest [NHN] <sup>+</sup> but yet asymmetric intramolecular hydrogen bond among all known aromatic diamine systems is reported, supported by IR, NMR and theoretical calculations of this and related cation with <i>ortho</i> -CH <sub>2</sub> OH groups.									
43 (794)	Ozeryanskii V.A., Shevchuk D.A., Pozharskii A.F., Kazheva O.N., Chekhlov A.N., Dyachenko O.A. – Protonation of naphthalene proton sponges containing higher <i>N</i> -alkyl groups. Structural consequences on proton accepting properties and intramolecular hydrogen bonding – <i>J. Mol. Struct.</i> , <b>2008</b> , 892, N 1–3, 63–67. (doi:10.1016/j.molstruc.2008.04.051)									

44 (800)	<p>Ozeryanskii V.A., Pozharskii A.F., Artaryan A.K., Vistorobskii N.V., Starikova Z.A. – 1,8-Bis(dialkylamino)-4,5-dinitronaphthalenes and 4,5-bis(dimethylamino)naphthalene-1,8-dicarbaldehyde as “push-pull” proton sponges: when and why formyl groups become stronger <math>\pi</math>-electron acceptors than nitro groups – <i>Eur. J. Org. Chem.</i>, <b>2009</b>, N 8, 1241–1248. (doi:10.1002/ejoc.200800948)</p> <p>The diagram shows the chemical structure of 1,8-bis(dialkylamino)-4,5-dinitronaphthalene. It features two naphthalene rings connected at the 1 and 8 positions. Each ring has two dialkylamino groups (D) at the 4 and 5 positions and two nitro groups (A) at the 1 and 8 positions. Two resonance arrows indicate electron movement between the rings. To the right, a π-conjugation diagram shows the molecule in a twisted conformation with red and blue regions representing electron density differences, and a calculated dipole moment of <math>\mu = 9.5\text{--}14.5 \text{ D}</math> and absorption maximum <math>\lambda_{\max} = 440\text{--}480 \text{ nm}</math>.</p>
45 (821)	<p>Mekh M.A., Pozharskii A.F., Ozeryanskii V.A. – Electrophilic substitution in 5,6-bis(dimethylamino)acenaphthylene as a route to push-pull proton sponges – <i>Polish J. Chem.</i>, <b>2009</b>, 83, N 9, 1609–1621. (<a href="http://www.ichf.edu.pl/pjch/pj-2009/pj-2009-09a.pdf">http://www.ichf.edu.pl/pjch/pj-2009/pj-2009-09a.pdf</a>)</p> <p>The reaction scheme shows the reversible addition of a nucleophile (Solv) to 5,6-bis(dimethylamino)acenaphthylene. The reactant is a yellow-colored acenaphthylene derivative with two dimethylamino groups (Me<sub>2</sub>N) and two aldehyde groups (CHO). The product is a purple-colored substituted acenaphthylene where one Me<sub>2</sub>N group is replaced by the nucleophile, and the other Me<sub>2</sub>N group is replaced by a chloride ion (ClO<sub>4</sub><sup>-</sup>). Solv-HClO<sub>4</sub> is also present.</p>
46 (825)	<p>Povalyakhina M.A., Pozharskii A.F., Dyablo O.V., Ozeryanskii V.A., Ryabtsova O.V. – <i>tert</i>-Amino effect in naphthalene proton sponges: a novel approach to benzo[<i>h</i>]quinoline and quino[7,8:7',8']quinoline derivatives – <i>Mendeleev Commun.</i>, <b>2010</b>, 20, N 1, 36–38. (doi:10.1016/j.mencom.2010.01.014)</p> <p>The reaction scheme shows the <i>tert</i>-amino-type rearrangement of 2-Vinyl- and 2,7-divinyl-1,8-bis(dimethylamino)naphthalenes. The reactant is a naphthalene derivative with two dimethylamino groups (Me<sub>2</sub>N) and two aldehyde groups (CHO) at the 1 and 8 positions. It undergoes a rearrangement to form either a 1,8-bis(dimethylamino)benzo[<i>h</i>]quinoline or a quino[7,8:7',8']quinoline derivative. The substituents R<sup>1</sup> and R<sup>2</sup> can be CN, CO<sub>2</sub>Et, Ts etc.</p>
47 (832)	<p>Pozharskii A.F., Degtyarev A.V., Ozeryanskii V.A., Ryabtsova O.V., Starikova Z.A., Borodkin G.S. – 1,8,1',8'-Tetrakis(dimethylamino)-2,2'-dinaphthylmethanols: double <i>in/out</i> proton sponges with low-barrier hydrogen-bond switching – <i>J. Org. Chem.</i>, <b>2010</b>, 75, N 14, 4706–4715. (doi:10.1021/jo100384s)</p> <p>The diagram shows the chemical structure of 1,8,1',8'-Tetrakis(dimethylamino)-2,2'-dinaphthylmethanol. It consists of two naphthalene rings connected at the 2 and 2' positions via a central methylene bridge (-CH<sub>2</sub>-). Each naphthalene ring has four dimethylamino groups (Me<sub>2</sub>N) at the 1, 8, 1', and 8' positions. Hydrogen bonding is indicated between the amine groups and the bridging methylene group.</p> <p><i>Rechelation or formation of O–H...O–H...N dimers depending on R, aggregate state, and temperature</i></p>

48  
(836)

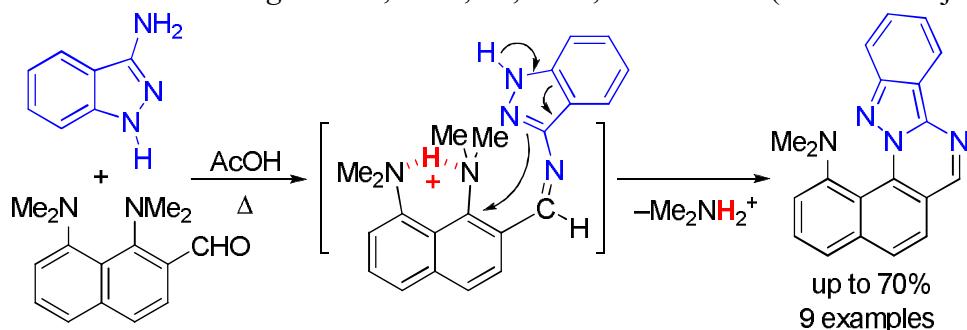
Pozharskii A.F., Povalyakhina M.A., Degtyarev A.V., Ryabtsova O.V., Ozeryanskii V.A., Dyablo O.V., Tkachuk A.V., Kazheva O.N., Chekhlov A.N., Dyachenko O.A. – Naphthalene proton sponges as hydride donors: diverse appearances of the *tert*-amino-effect – *Org. Biomol. Chem.*, **2011**, 9, N 6, 1887–1900. (doi:10.1039/c0ob00899k)



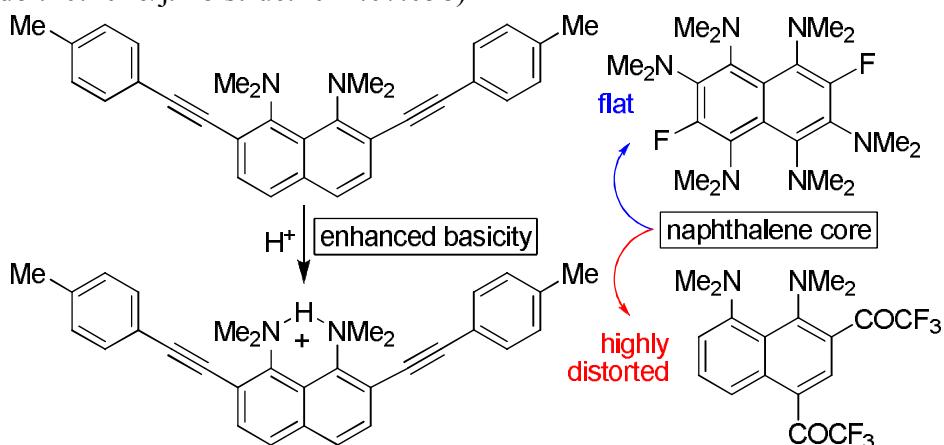
Hydrogen atoms (bold blue in the image) of *peri*-NMe<sub>2</sub> groups in the naphthalene proton sponge can intramolecularly migrate to an electron-accepting *ortho*-substituent(s) to give benzo[*h*]quinolines, quino[7,8;7',8']quinolines, *ortho*-Mannich bases and so on.

49  
(840)

Povalyakhina M.A., Antonov A.S., Dyablo O.V., Ozeryanskii V.A., Pozharskii A.F. – H-Bond-assisted intramolecular nucleophilic displacement of the 1-NMe<sub>2</sub> group in 1,8-bis(dimethylamino)naphthalenes as a route to multinuclear heterocyclic compounds and strained naphthalene derivatives – *J. Org. Chem.*, **2011**, 76, N 17, 7157–7166. (doi:10.1021/jo201171z)

50  
(841)

Boiko L.Z., Sorokin V.I., Filatova E.A., Starikova Z.A., Ozeryanskii V.A., Pozharskii A.F. – Three examples of naphthalene proton sponges with extreme or unusual structural parameters. General view on factors influencing proton sponge geometry – *J. Mol. Struct.*, **2011**, 1005, N 1–3, 12–16. (doi:10.1016/j.molstruc.2011.07.058)



Four new naphthalene proton sponges were structurally analyzed. Proton accepting properties and conformation of NMe<sub>2</sub> groups are generalized. Ethynyl groups may raise proton sponge's basicity if adjacent to the basic centers. Effective conjugation as stimulus for severe aromatic ring distortions.

51 (842)	<p>Власенко М.П., Озерянский В.А., Пожарский А.Ф. – Окисление 1-амино-4,5-бис(диметиламино)нафталина как путь к двойным "протонным губкам" на основе дibenzo[<i>a,h</i>]феназина и 1,1'-azonафталина – <i>Изв. АН, Сер. хим.</i>, <b>2011</b>, № 10, 1993–2002. Vlasenko M.P., Ozeryanskii V.A., Pozharskii A.F. – Oxidation of 1-amino-4,5-bis(dimethylamino)naphthalene as a route to the double "proton sponges" based on dibenzo[<i>a,h</i>]phenazine and 1,1'-azonaphthalene – <i>Russ. Chem. Bull.</i>, <b>2011</b>, 60, N 10, 2030–2039. (doi:10.1007/s11172-011-0309-2)</p>
52 (847)	<p>Пожарский А.Ф., Озерянский В.А., Филатова Е.А. – Гетероциклические супероснования: ретроспектива и текущие тенденции – <i>Химия гетероцикл. соедин.</i>, <b>2012</b>, № 1, 208–228. (обзор) Pozharskii A.F., Ozeryanskii V.A., Filatova E.A. – Heterocyclic superbases: retrospective and current trends – <i>Chem. Heterocycl. Compd.</i>, <b>2012</b>, 48, N 1, 200–219. (doi:10.1007/s10593-012-0983-5) (review)</p> <p>The structural principles known to date serving as the basis for the design of heterocyclic compounds with anomalously high basicity (superbasicity) are reviewed. A general classification is given for such superbases as proton sponges, compounds that are similar to proton sponges but are not sponges (proton-sponge-like), and proton traps.</p>
53 (849)	<p>Pozharskii A.F., Ozeryanskii V.A. – Proton sponges and hydrogen transfer phenomena – <i>Mendeleev Commun.</i>, <b>2012</b>, 22, N 3, 117–124. (doi:10.1016/j.mencom.2012.05.001) (focus article)</p> <p>Recent advances in the studies of hydrogen transfer (protonation, hydrogen bonding, hydride transfer and CH acidity) in proton sponges, its influence on the structure, stereodynamics and reactivity of these superbasic compounds and the use of the above phenomena for modelling enzyme catalysis have been discussed.</p>

54 (850)	Dyabolo O.V., Shmoilova E.A., Pozharskii A.F., Ozeryanskii V.A., Burov O.N., Starikova Z.A. – 4,5-Bis(dimethylamino)quinolines: proton sponge versus azine behavior – <i>Org. Lett.</i> , <b>2012</b> , <i>14</i> , N 16, 4134–4137. (doi:10.1021/o1301777s)
	<p><math>\text{R} = \text{NMe}_2</math>: only form <b>A</b> is observed in the solid, but <b>A</b> and <b>B</b> forms coexist in solution  <math>\text{R} = \text{Me}</math>: only form <b>B</b> is realized regardless of the aggregate state</p>
55 (858)	Ozeryanskii V.A., Vlasenko M.P., Pozharskii A.F. – "Proton sponge" amides: unusual chemistry and conversion into superbasic 6,7-bis(dimethylamino)perimidines – <i>Tetrahedron</i> , <b>2013</b> , <i>69</i> , N 7, 1919–1929. (doi:10.1016/j.tet.2012.12.040)
	<p><i>Hydrolytically stable</i></p> <p><math>\text{R} = \text{H}, \text{Me}; \text{X} = \text{Me}, \text{Ph}, \text{CF}_3</math></p>
	<p>Proton sponge <i>peri</i>-nitroamides, differing by their unusual hydrolytic stability, offer a simple way to construct previously unknown perimidine proton sponges with the basicities well above that of the parent proton sponge and perimidines. For compounds with the free NH group in the heterocyclic ring, a possibility to form zwitterionic structures is also considered.</p>
56 (861)	Ozeryanskii V.A., Pozharskii A.F. – Simple and hydrolytically stable proton sponge based organic cation displaying hydrogen bonding and a number of related phenomena – <i>Tetrahedron</i> , <b>2013</b> , <i>69</i> , N 9, 2107–2112. (doi:10.1016/j.tet.2013.01.022)
57 (865)	<p>Пожарский А.Ф., Мех М.А., Озерянский В.А. – Протонные губки, конденсированные с пиридазиновым и пиррольным ядрами – <i>Химия гетероцикл. соедин.</i>, <b>2013</b>, № 2, 277–283.</p> <p>Pozharskii A.F., Mekh M.A., Ozeryanskii V.A. – Proton sponges condensed with pyridazine and pyrrole nuclei – <i>Chem. Heterocycl. Compd.</i>, <b>2013</b>, <i>49</i>, N 2, 253–259. (doi:10.1007/s10593-013-1242-0)</p>
	<p><math>\text{R}, \text{R}^1 = \text{H}, \text{Cl}; \text{R}^2 = \text{Ph}, \text{CO}_2\text{Me}</math></p>

58 (866)	Ozeryanskii V.A., Pozharskii A.F., Filarowski A., Borodkin G.S. – Extreme magnetic separation of geminal protons in protonated <i>N,N,N'</i> -trimethyl-1,8-diaminonaphthalene. A puzzle of the fourth methyl group – <i>Org. Lett.</i> , <b>2013</b> , <i>15</i> , N 9, 2194–2197. (doi:10.1021/o1400746u)
	<p>Monoprotonated <i>N,N,N'</i>-trimethyl-1,8-diaminonaphthalene demonstrates fast exchange of <math>H_{in}</math> and <math>H_{out}</math> protons, in which a counterion (<math>BF_4^-</math> and <math>Br^-</math> were tested) participates. The process can be frozen below 185 K revealing a tremendous magnetic separation (up to <math>\Delta\delta = 11.6</math> ppm) of these otherwise equal NH protons with the enzyme-like proton transfer and a <math>\sim 7</math> kcal mol<sup>-1</sup> energetic barrier.</p>
59 (867)	Ozeryanskii V.A., Filatova E.A., Pozharskii A.F., Shevchuk D.A., Sorokin V.I. – To what extent can a conjugation between two pairs of <i>peri</i> -nitro and <i>peri</i> -amino groups be realized through the naphthalene core? – <i>J. Phys. Org. Chem.</i> , <b>2013</b> , <i>26</i> , N 6, 492–502. (doi:10.1002/poc.3114)
	<p>For the first time, modified <math>NH_2</math> groups (<i>N</i>-acylated, <i>N</i>-alkylated, <i>N,N'</i>-bridged, <i>N</i>-heterocyclic, and <i>N</i>-deprotonated) were ranged with regard to their electron-donating ability from the naphthalene <i>peri</i>-positions to the conjugated <math>NO_2</math> groups in dimethyl sulfoxide solution and in the solid state.</p>
60 (869)	Sorokin V.I., Pozharskii A.F., Ozeryanskii V.A. – Electrophilic fluorination of <i>N,N</i> -dimethylaniline, <i>N,N</i> -dimethylnaphthalen-1-amine and 1,8-bis(dimethylamino)naphthalene with N–F reagents – <i>J. Fluorine Chem.</i> , <b>2013</b> , <i>154</i> , 67–72. (doi:10.1016/j.jfluchem.2013.06.017)
	<p>Fluorination of dimethylaminoarenes with Selectfluor and NFSI gave complex mixtures. The electrophilic fluorination gave mostly <i>ortho</i>-F rather than <i>para</i>-F products. Proton sponge displays the highest selectivity. The <i>ortho</i>-selectivity is provided by <math>Me_2N \rightarrow F</math> and <math>CH \dots O</math> coordination in transition state. Chlorination instead of fluorination was noted under the action of NFSI–<math>ZrCl_4</math> system.</p>
61 (871)	Filatova E.A., Pozharskii A.F., Gulevskaya A.V., Vistorobskii N.V., Ozeryanskii V.A. – Synthesis of 2-alkynyl-, 4-alkynyl- and 2,7-dialkynyl-1,8-bis(dimethylamino)naphthalenes and the unexpected influence of <i>ortho</i> -alkynyl groups on their basicity – <i>Synlett</i> , <b>2013</b> , <i>24</i> , N 19, 2515–2518. (doi:10.1055/s-0033-1339339) (cluster "Superbases")
	<p><math>R = Ph, p\text{-}Tol, SiMe_3, H</math></p>

62 (872)	<p>Ozeryanskii V.A., Vakhromova P.A., Pozharskii A.F. – 1,8-Bis(bromomethyl)naphthalene in the synthesis of 1,5-diazacyclodecane and benz[<i>de</i>]isoquinoline proton sponges – <i>Arkivoc</i>, <b>2014</b>, (ii), 333–345. (doi:10.3998/ark.5550190.p008.253) (<i>published November 6, 2013</i>)</p>
63 (889)	<p>Ozeryanskii V.A., Pozharskii A.F., Antonov A.S., Filarowski A. – <i>Out</i>-Basicity of 1,8-bis(dimethylamino)naphthalene: the experimental and theoretical challenge – <i>Org. Biomol. Chem.</i>, <b>2014</b>, 12, N 15, 2360–2369. (doi:10.1039/c3ob41986j) (<i>journal cover; hot Organic &amp; Biomolecular Chemistry articles for March</i>)</p> <p>An estimation was made possible using:</p> <p>Two different ways of protonation of the archetypal proton sponge, the <i>in</i>- and the <i>out</i>-modes, were, for the first time, investigated in detail using specially configured model compounds and a combination of physical and theoretical methods.</p>
64 (895)	<p>Antonov A.S., Mikshiev V.Y., Pozharskii A.F., Ozeryanskii V.A. – <i>ortho</i>-Ketimines of 1,8-bis(dimethylamino)naphthalene: synthesis, hydrolytic stability and transfer of basicity from proton sponge moiety to the imino function – <i>Synthesis</i>, <b>2014</b>, 46, N 23, 3273–3282. (doi:10.1055/s-0034-1379008)</p>
65 (897)	<p>Filatova E.A., Pozharskii A.F., Gulevskaya A.V., Ozeryanskii V.A. – Multiple transformations of 2-alkynyl-1,8-bis(dimethylamino)naphthalenes into benzo[<i>g</i>]indoles. Pd/Cu-Dependent switching of the electrophilic and nucleophilic sites in acetylenic bond and a puzzle of porcelain catalysis – <i>J. Org. Chem.</i>, <b>2015</b>, 80, N 2, 872–881. (doi:10.1021/jo502363t)</p>

66 (899)	<p>Kachalkina S.G., Borodkin G.S., Pozharskii A.F., Antonov A.S., Borodkina I.G., Maltsev Y.F., Filatova E.A., Filarowski A., Ozeryanskii V.A. – Base-promoted transformation of 2-C(O)R-1,8-bis(dimethylamino)naphthalenes into benzo[g]indole derivatives – <i>Mendeleev Commun.</i>, <b>2015</b>, 25, N 3, 182–184. (doi:10.1016/j.mencom.2015.05.007)</p>
1,8-Bis(dimethylamino)naphthalenes bearing 2-positioned trifluoroacetyl or ethoxycarbonyl group on treatment with 2-lithio-1,8-bis(dimethylamino)naphthalene undergo base-promoted transformation into benzo[g]indole derivatives in small to moderate yield, representing previously unknown mode of the pyrrole ring closure which proceeds via deprotonation of the NMe group.	
67 (901)	<p>Ozeryanskii V.A., Gorbacheva A.Yu., Pozharskii A.F., Vlasenko M.P., Tereznikov A.Yu., Chernov'yants M.S. – The first proton sponge-based amino acids: synthesis, acid-base properties and some reactivity – <i>Org. Biomol. Chem.</i>, <b>2015</b>, 13, N 31, 8524–8532. (doi:10.1039/c5ob01065a)</p>
	<p>The first hybrid bases constructed of 1,8-bis(dimethylamino)naphthalene and glycine or alanine residues were synthesised, structurally characterised and unusual channels of their reactivity revealed.</p>
68 (906)	<p>Antonov A.S., Pozharskii A.F., Ozeryanskii V.A., Filarowski A., Suponitsky K.Y., Tolstoy P.M., Vovk M.A. – Ring lithiation of 1,8-bis(dimethylamino)naphthalene: another side of the ‘proton sponge coin’ – <i>Dalton Trans.</i>, <b>2015</b>, 44, N 40, 17756–17766. (doi:10.1039/c5dt02482j)</p>
	<p>A set of X-ray, multinuclear NMR and DFT approaches was used to address a question of selectivity, relative stability and enhanced reactivity of ring lithiated 1,8-bis(dimethylamino)naphthalenes.</p>
69 (907)	<p>Dyablo O.V., Pozharskii A.F., Shmoilova E.A., Ozeryanskii V.A., Fedik N.S., Suponitsky K.Yu. – Molecular structure and protonation trends in 6-methoxy- and 8-methoxy-2,4,5-tris(dimethylamino)quinolines – <i>J. Mol. Struct.</i>, <b>2016</b>, 1107, 305–315. (doi:10.1016/j.molstruc.2015.11.056)</p>
	<p>Strong basicity interplay between aza- and <i>peri</i>-NMe<sub>2</sub> groups in quinolines was studied. 6- and 8-Methoxy-2,4,5-tris(dimethylamino)quinolines display different protonation mode. 6-Methoxy-2,4,5-tris(dimethylamino)quinoline is the most basic of quinolines ever known.</p>

70 (909)	<p>Filatova E.A., Gulevskaya A.V., Pozharskii A.F., Ozeryanskii V.A. – Synthesis and some properties of alkynyl derivatives of 1,3-dialkylperimidones. An example of the 1,2-palladium migration in the Sonogashira reaction – <i>Tetrahedron</i>, <b>2016</b>, 72, N 12, 1547–1557. (doi:10.1016/j.tet.2016.02.003)</p> <p>Reaction scheme: A 1,3-dialkylperimidone derivative (with R groups) reacts with an alkyne (<math>\equiv\text{R}^1</math>) in the presence of Pd-Cat. to form an intermediate alkynyl derivative. This intermediate then undergoes thermolysis to yield a tricyclic product where the perimidone ring has undergone a 1,2-palladium migration.</p> <p>Substituents: 6-Br; 6,7-diBr; 4,6,7- and 4,6,9-triBr; 4,6,7,9-tetraBr</p> <p>Alkyne substituents: R = Me, Et; R<sup>1</sup> = Ph, TMS, H</p> <p>Product note: (for 6,7-bis- and 4,6,7,9-tetrakis(phenylethylnyl))</p>																																						
71 (911)	<p>Pozharskii A.F., Ozeryanskii V.A., Mikshiev V.Y., Antonov A.S., Chernyshev A.V., Metelitsa A.V., Borodkin G.S., Fedik N.S., Dyablo O.V. – 10-Dimethylamino derivatives of benzo[<i>h</i>]quinoline and benzo[<i>h</i>]quinazolines: fluorescent proton sponge analogues with opposed <i>peri</i>-NMe<sub>2</sub>/–N= groups. How to distinguish between proton sponges and pseudo-proton sponges – <i>J. Org. Chem.</i>, <b>2016</b>, 81, N 13, 5574–5587. (doi:10.1021/acs.joc.6b00917)</p> <p>Schematic diagram: A 10-dimethylamino derivative of a benzo[<i>h</i>]quinoline or benzo[<i>h</i>]quinazoline is shown. It features a quinoline/quinazoline core with a dimethylamino group (Me<sub>2</sub>N) at the 10-position and a nitrogen atom with a double bond (–N=) at the 5-position. A proton (H<sup>+</sup>) and a photon (hv) are shown interacting with the molecule, leading to a charge transfer (CT) process where the proton is transferred to the nitrogen atom.</p> <p>Substituents: X = CH, N; R = H, Bu<sup>t</sup>, Ar</p>																																						
72 (914)	<p>Vlasenko M.P., Ozeryanskii V.A. – One-scale basicities of diaminobenzenes and diaminonaphthalenes – from aniline to proton sponge – <i>J. Phys. Org. Chem.</i>, <b>2017</b>, 30, N 2, e3609. (doi:10.1002/poc.3609)</p> <p>Bar chart: A bar chart showing the basicity (pK<sub>a</sub>) of various aromatic diamines and polyaminoarenes. The x-axis represents different compounds labeled 1 through 18, and the y-axis represents pK<sub>a</sub> values from 0.00 to 14.00. The bars are color-coded by compound type: 1-10 are blue, 11-18 are purple. Specific values are labeled above each bar:</p> <table border="1"> <thead> <tr> <th>Compound</th> <th>pK<sub>a</sub></th> </tr> </thead> <tbody> <tr><td>1</td><td>0.39</td></tr> <tr><td>2</td><td>0.25</td></tr> <tr><td>3</td><td>0.21</td></tr> <tr><td>4</td><td>0.21</td></tr> <tr><td>5</td><td>0.45</td></tr> <tr><td>6</td><td>0.64</td></tr> <tr><td>7</td><td>0.16</td></tr> <tr><td>8</td><td>0.64</td></tr> <tr><td>9</td><td>0.16</td></tr> <tr><td>10</td><td>1.65</td></tr> <tr><td>11</td><td>2.26</td></tr> <tr><td>12</td><td>2.02</td></tr> <tr><td>13</td><td>2.02</td></tr> <tr><td>14</td><td>2.02</td></tr> <tr><td>15</td><td>2.02</td></tr> <tr><td>16</td><td>5.96</td></tr> <tr><td>17</td><td>7.21</td></tr> <tr><td>18</td><td>9.84</td></tr> </tbody> </table> <p>For the first time, benzenes and naphthalenes with NH<sub>2</sub> and NMe<sub>2</sub> groups (anilines, naphthylamines, polyaminoarenes, proton sponges) were uniformly ranged with regard to their basicity strength in 20% EtOH and 80% dioxane.</p>	Compound	pK <sub>a</sub>	1	0.39	2	0.25	3	0.21	4	0.21	5	0.45	6	0.64	7	0.16	8	0.64	9	0.16	10	1.65	11	2.26	12	2.02	13	2.02	14	2.02	15	2.02	16	5.96	17	7.21	18	9.84
Compound	pK <sub>a</sub>																																						
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73 (916)	<p>Ozeryanskii V.A., Vlasenko M.P., Pozharskii A.F., Sergeev S., Maes B.U.W., Franck P., Herrebout W.A. – Proton sponge analogue of the Tröger's base: A compound with remarkable enantiomeric stability – <i>ChemistrySelect</i>, <b>2017</b>, 2, N 30, 9882–9887. (doi:10.1002/slct.201701963)</p> <p>Reaction scheme: A complex polycyclic compound labeled PSTB (Proton Sponge Tröger's base) reacts with formaldehyde ((CH<sub>2</sub>O)<sub>n</sub>) to form its proton sponge form. In the proton sponge form, one of the nitrogen atoms is protonated, indicated by a pink circle with a hydrogen atom.</p> <p>Text: Proton sponge residues account for unusual chemistry and both for sterical and chemical inhibition to racemization of new chiral base <b>PSTB</b> (proton sponge Tröger's base). Both neutral as well as doubly-protonated forms of <b>PSTB</b> are prone to form host-guest compounds.</p>																																						