

Молекулы органических линкеров для металлоорганических каркасов

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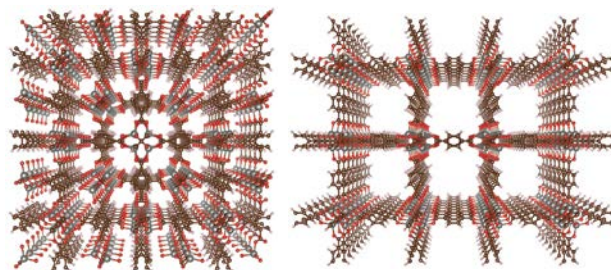
Organic Linker Molecules for Metal Organic Frameworks (MOFs)

More than 20,000 examples of metal organic frameworks (MOFs) and porous coordination polymers (PCPs) have been reported to date. The unique structures of MOFs and PCPs have allowed for extensive and varied chemical combinations between metal ions and organic ligands.^{1,2} MOFs and PCPs feature porous coordination networks with extensive surface area, exceeding that of activated carbon and zeolite. The nanometer sized pores are capable of absorbing small molecules, and are expected to be used in applications for gas storage and separation, sensors, and for catalysis.

Imidazole-based metal organic frameworks with a zeolitic function, the so-called ZIFs (Zeolitic Imidazolate Frameworks), have received great attention due to the thermodynamic stability, chemical stability, and particularly they are stable in water.^{3,4}

The 'crystal sponge method', wherein MOFs and PCPs uptake small molecules, enables us to solve the X-ray structure of small molecules by taking advantage of the crystalline nature of MOF's and PCP's. A task otherwise impossible for small molecules whom do not easily crystallize. X-ray structure analyses of amorphous and gas organic molecules are also possible by the method.^{5,6}

We are able to design various MOFs and PCPs by taking into account the metal coordination number and organic ligand structure, as well as identify a unique function for the given MOF or PCP by introducing additional functional groups on the organic ligand. TCI offers rich variety of organic ligands (organic linker) for the design various MOFs/PCPs.



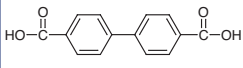
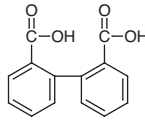
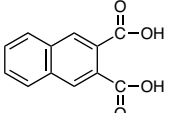
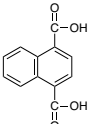
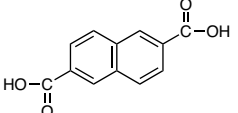
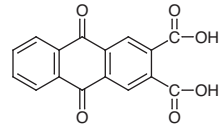
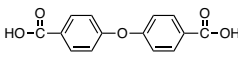
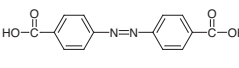
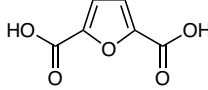
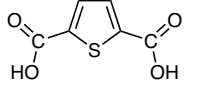
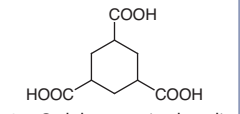
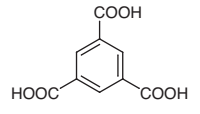
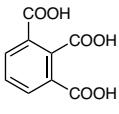
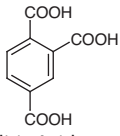
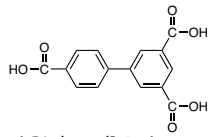
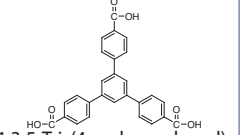
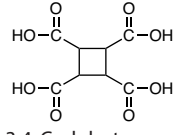
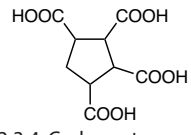
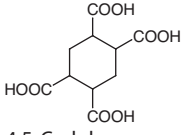
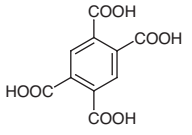
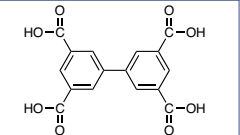
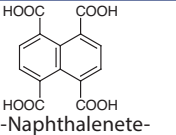
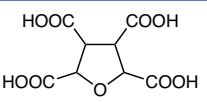
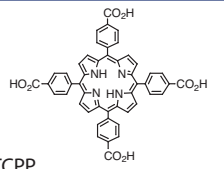
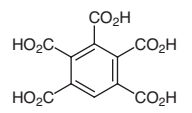
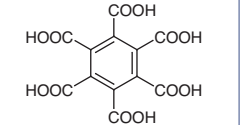
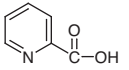
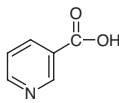
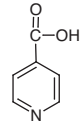
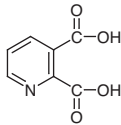
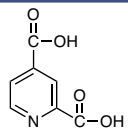
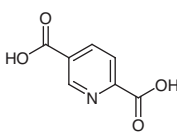
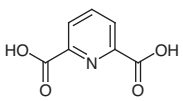
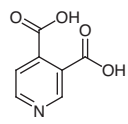
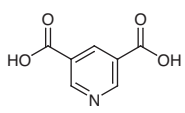
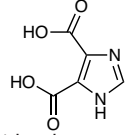
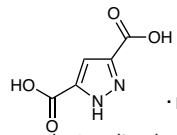
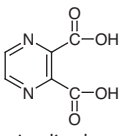
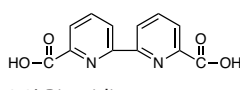
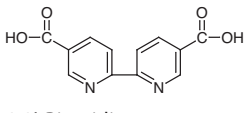
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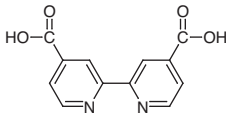
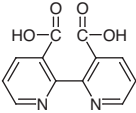
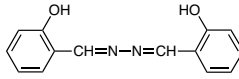
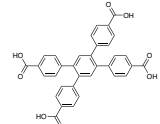
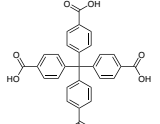
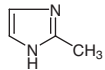
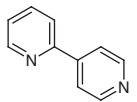
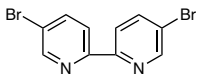
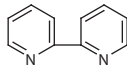
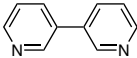
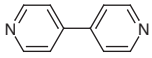
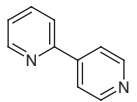
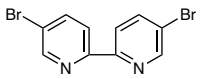
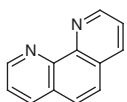
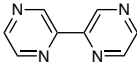
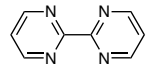
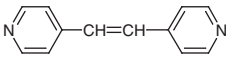
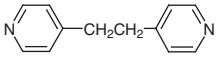
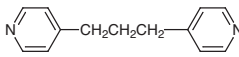
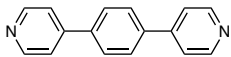
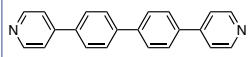
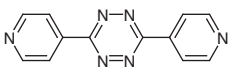
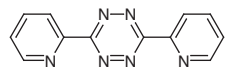
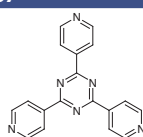
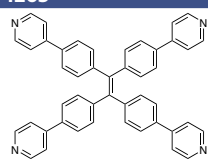
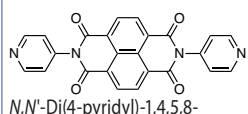
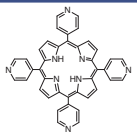
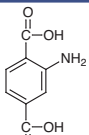
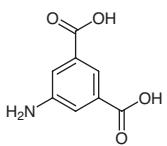
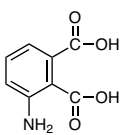
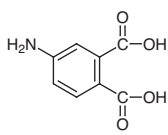
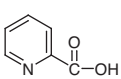
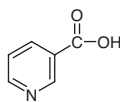
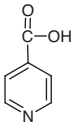
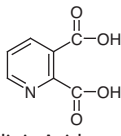
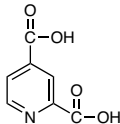
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Oxygenated Organic Linkers

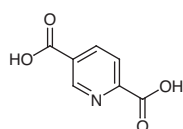
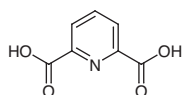
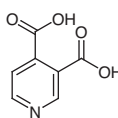
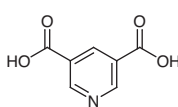
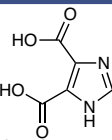
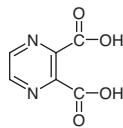
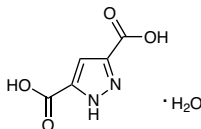
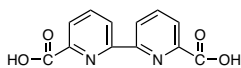
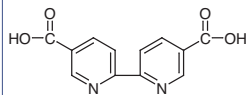
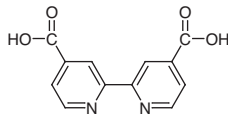
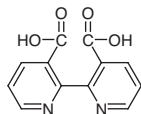
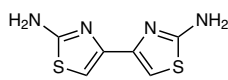
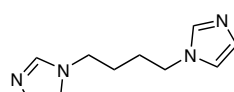
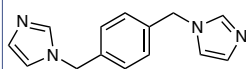
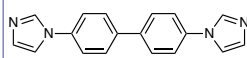
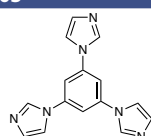
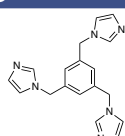
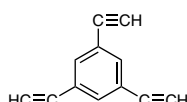
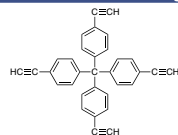
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C0475 25g 100g 500g <i>trans</i> -1,4-Cyclohexanedicarboxylic Acid CAS RN: 619-82-9	C0789 25g 100g <i>cis</i> -1,4-Cyclohexanedicarboxylic Acid CAS RN: 619-81-8	C2186 5g 25g 1,3-Cyclohexanedicarboxylic Acid (<i>cis</i> - and <i>trans</i> - mixture) CAS RN: 3971-31-1	C1953 1g 5g (1 <i>R</i> ,2 <i>R</i>)-1,2-Cyclohexanedicarboxylic Acid CAS RN: 46022-05-3	C0458 25g 500g <i>cis</i> -1,2-Cyclohexanedicarboxylic Acid CAS RN: 610-09-3

C0474 25g 500g <i>trans</i> -1,2-Cyclohexanedicarboxylic Acid CAS RN: 2305-32-0	N0753 5g 25g 2,3-Norbornanedicarboxylic Acid CAS RN: 1724-08-9	N1029 5g 25g 5-Norbornene-2,3-dicarboxylic Acid CAS RN: 3813-52-3	B5595 1g Bicyclo[2.2.2]octane-1,4-dicarboxylic Acid CAS RN: 711-02-4	D4383 1g Decahydro-1,4-naphthalene-dicarboxylic Acid (mixture of isomers) CAS RN: 879360-14-2
A1358 5g 25g 1,3-Dicarboxyadamantane CAS RN: 39269-10-8	A1357 5g 1,3-Adamantanediadicetic Acid CAS RN: 17768-28-4	T0166 25g 500g Terephthalic Acid CAS RN: 100-21-0	M3640 1g 2-Methylterephthalic Acid CAS RN: 5156-01-4	T0930 1g 5g Tetrafluoroterephthalic Acid CAS RN: 652-36-8
D2208 5g 25g 2,5-Dimethylterephthalic Acid CAS RN: 6051-66-7	D1698 1g 5g 2,5-Dichloroterephthalic Acid CAS RN: 13799-90-1	C3862 5g 25g TCPA CAS RN: 2136-79-0	B1321 5g 25g Bromoterephthalic Acid CAS RN: 586-35-6	D3994 5g 25g 2,5-Dibromoterephthalic Acid CAS RN: 13731-82-3
H1385 1g 5g 2-Hydroxyterephthalic Acid CAS RN: 636-94-2	D3899 5g 25g 2,5-Dihydroxyterephthalic Acid CAS RN: 610-92-4	A1291 25g 2-Aminoterephthalic Acid CAS RN: 10312-55-7	N0272 5g 25g Nitroterephthalic Acid CAS RN: 610-29-7	I0155 25g 500g Isophthalic Acid CAS RN: 121-91-5
B4232 1g 5g 5-Bromoisophthalic Acid CAS RN: 23351-91-9	H0794 25g 500g 5-Hydroxyisophthalic Acid CAS RN: 618-83-7	M1835 5g 5-Methoxyisophthalic Acid CAS RN: 46331-50-4	A1290 25g 100g 500g 5-Aminoisophthalic Acid CAS RN: 99-31-0	N0520 25g 500g 5-Nitroisophthalic Acid CAS RN: 618-88-2
T1374 1g 5g Tetrafluoroisophthalic Acid CAS RN: 1551-39-9	P0287 25g 500g Phthalic Acid CAS RN: 88-99-3	F0353 5g 3-Fluorophthalic Acid CAS RN: 1583-67-1	A1516 1g 5g 3-Aminophthalic Acid CAS RN: 5434-20-8	N0243 25g 500g 3-Nitrophthalic Acid CAS RN: 603-11-2
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B2257 1g 5g 25g 4-Bromophthalic Acid CAS RN: 6968-28-1	D6038 1g 5g 4,5-Difluorophthalic Acid CAS RN: 18959-31-4	D2350 1g 5g 4,5-Dichlorophthalic Acid CAS RN: 56962-08-4	T0986 5g 25g Tetrafluorophthalic Acid CAS RN: 652-03-9	T0070 25g 500g Tetrachlorophthalic Acid Hemihydrate CAS RN: 632-58-6

B1191 5g 25g  4,4'-Bibenzoic Acid CAS RN: 787-70-2	D0864 25g 100g  2,2'-Bibenzoic Acid CAS RN: 482-05-3	N0526 5g 25g  2,3-Naphthalenedicarboxylic Acid CAS RN: 2169-87-1	N0606 25g 100g  1,4-Naphthalenedicarboxylic Acid CAS RN: 605-70-9	N0377 5g 25g 100g  2,6-Naphthalenedicarboxylic Acid CAS RN: 1141-38-4
A1681 1g  Anthraquinone-2,3-dicarboxylic Acid CAS RN: 27485-15-0	D2115 25g 100g  4,4'-Dicarboxydiphenyl Ether CAS RN: 2215-89-6	A1596 1g 5g  4,4'-Azodibenzoic Acid CAS RN: 586-91-4	F0710 5g 25g  2,5-Furandicarboxylic Acid CAS RN: 3238-40-2	T2347 5g 25g  2,5-Thiophenedicarboxylic Acid CAS RN: 4282-31-9
C2029 5g 25g  1,3,5-Cyclohexanetricarboxylic Acid CAS RN: 25357-95-3	B0043 25g 100g 500g  1,3,5-Benzenetricarboxylic Acid CAS RN: 554-95-0	H1592 5g  Hemimellitic Acid CAS RN: 569-51-7	B0042 25g 100g 500g  Trimellitic Acid CAS RN: 528-44-9	B5795 1g  [1,1'-Biphenyl]-3,4',5'-tricarboxylic Acid CAS RN: 677010-20-7
T2647 1g 5g  1,3,5-Tris(4-carboxyphenyl)-benzene CAS RN: 50446-44-1	C2502 1g  1,2,3,4-Cyclobutanetetracarboxylic Acid CAS RN: 53159-92-5	C0856 5g 25g  1,2,3,4-Cyclopentanetetracarboxylic Acid CAS RN: 3724-52-5	C2198 5g 25g  1,2,4,5-Cyclohexanetetracarboxylic Acid CAS RN: 15383-49-0	B0039 25g 100g 500g  Pyromellitic Acid CAS RN: 89-05-4
B3792 200mg  Biphenyl-3,3',5,5'-tetracarboxylic Acid CAS RN: 4371-28-2	N0770 25g 250g  1,4,5,8-Naphthalenetetracarboxylic Acid (contains Monoanhydride) CAS RN: 128-97-2	T0975 25g 500g  Tetrahydrofuran-2,3,4,5-tetracarboxylic Acid CAS RN: 26106-63-8	A5015 100mg 1g  TCPP CAS RN: 14609-54-2	B0952 5g 25g  Benzenepentacarboxylic Acid CAS RN: 1585-40-6
B0246 5g 25g  Mellitic Acid CAS RN: 517-60-2	P0421 25g 100g 500g  Picolinic Acid CAS RN: 98-98-6	N0082 25g 500g  Nicotinic Acid CAS RN: 59-67-6	I0207 25g 500g  Isonicotinic Acid CAS RN: 55-22-1	P0550 25g 500g  Quinolinic Acid CAS RN: 89-00-9
P2416 5g 25g  2,4-Lutidinic Acid CAS RN: 499-80-9	P0552 25g  Isocinchomeronic Acid CAS RN: 100-26-5	P0554 25g 100g 500g  Dipicolinic Acid CAS RN: 499-83-2	P0682 5g 25g  Cinchomeronic Acid CAS RN: 490-11-9	P0551 5g 25g  3,5-Pyridinedicarboxylic Acid CAS RN: 499-81-0
I0003 5g  1H-Imidazole-4,5-dicarboxylic Acid CAS RN: 570-22-9	P1048 5g 25g  Pyrazole-3,5-dicarboxylic Acid Monohydrate CAS RN: 303180-11-2	P0545 25g  2,3-Pyrazinedicarboxylic Acid CAS RN: 89-01-0	B3533 1g 5g  2,2'-Bipyridine-6,6'-dicarboxylic Acid CAS RN: 4479-74-7	B3502 1g 5g  2,2'-Bipyridine-5,5'-dicarboxylic Acid CAS RN: 1802-30-8

B1876 100mg 1g  2,2'-Biisonicotinic Acid CAS RN: 6813-38-3	B3622 1g  2,2'-Bipyridine-3,3'-dicarboxylic Acid CAS RN: 4433-01-6	S0850 5g 25g  Salicylaldehyde Azine CAS RN: 959-36-4	T3894 200mg 1g  1,2,4,5-Tetrakis(4-carboxyphenyl)benzene CAS RN: 1078153-58-8	T3896 1g  Tetrakis(4-carboxyphenyl)methane CAS RN: 160248-28-2
Nitrogenated Organic Linkers				
M0345 25g 100g 500g  2-Methylimidazole CAS RN: 693-98-1	P0544 25g 500g  Pyrazine CAS RN: 290-37-9	D0134 25g 100g 500g  DABCO CAS RN: 280-57-9	H0093 25g 500g  HMTA CAS RN: 100-97-0	I0001 25g 100g 500g  Imidazole CAS RN: 288-32-4
B0863 1g 5g  2,4'-Bipyridyl CAS RN: 581-47-5	D4358 1g  5,5'-Dibromo-2,2'-bipyridyl CAS RN: 15862-18-7	B0468 25g 100g 500g  2,2'-Bipyridyl CAS RN: 366-18-7	B3984 1g 5g  3,3'-Bipyridyl CAS RN: 581-46-4	B0469 25g 100g  4,4'-Bipyridyl CAS RN: 553-26-4
B0863 1g 5g  2,4'-Bipyridyl CAS RN: 581-47-5	D4358 1g  5,5'-Dibromo-2,2'-bipyridyl CAS RN: 15862-18-7	P0221 1g 25g  1,10-Phenanthroline Monohydrate CAS RN: 5144-89-8	B4297 100mg 500mg  2,2'-Bipyrazine CAS RN: 10199-00-5	B2496 200mg 1g  2,2'-Bipyrimidyl CAS RN: 34671-83-5
D0276 10g 25g  1,2-Di(4-pyridyl)ethylene CAS RN: 13362-78-2	D3752 1g 5g  1,2-Di(4-pyridyl)ethane CAS RN: 4916-57-8	D0938 25g 500g  1,3-Di(4-pyridyl)propane CAS RN: 17252-51-6	P1550 200mg 1g  1,4-Di(4-pyridyl)benzene CAS RN: 113682-56-7	D4203 200mg 1g  4,4'-Di(4-pyridyl)biphenyl CAS RN: 319430-87-0
D3211 1g 5g  3,6-Di(4-pyridyl)-1,2,4,5-tetrazine CAS RN: 57654-36-1	D3640 1g 5g  3,6-Di(2-pyridyl)-1,2,4,5-tetrazine CAS RN: 1671-87-0	T1937 1g 5g  2,4,6-Tri(4-pyridyl)-1,3,5-triazine (purified by sublimation) CAS RN: 42333-78-8	T4263 1g  TPTPE CAS RN: 1227195-24-5	D4152 1g 5g  N,N'-Di(4-pyridyl)-1,4,5,8-naphthalenetetracarboxydiimide CAS RN: 34151-49-0
T2222 1g 5g  5,10,15,20-Tetra(4-pyridyl)porphyrin CAS RN: 16834-13-2	A1291 25g  2-Aminoterephthalic Acid CAS RN: 10312-55-7	A1290 25g 100g 500g  5-Aminoisophthalic Acid CAS RN: 99-31-0	A1516 1g 5g  3-Aminophthalic Acid CAS RN: 5434-20-8	A1512 5g 25g  4-Aminophthalic Acid CAS RN: 5434-21-9
P0421 25g 100g 500g  Picolinic Acid CAS RN: 98-98-6	N0082 25g 500g  Nicotinic Acid CAS RN: 59-67-6	I0207 25g 500g  Isonicotinic Acid CAS RN: 55-22-1	P0550 25g 500g  Quinolinic Acid CAS RN: 89-00-9	P2416 5g 25g  2,4-Lutidinic Acid CAS RN: 499-80-9

Organic Linker Molecules for Metal Organic Frameworks (MOFs)

P0552 25g  Isocinchomeronic Acid CAS RN: 100-26-5	P0554 25g 100g 500g  Dipicolinic Acid CAS RN: 499-83-2	P0682 5g 25g  Cinchomeronic Acid CAS RN: 490-11-9	P0551 5g 25g  3,5-Pyridinedicarboxylic Acid CAS RN: 499-81-0	I0003 5g  1H-Imidazole-4,5-dicarboxylic Acid CAS RN: 570-22-9
P0545 25g  2,3-Pyrazinedicarboxylic Acid CAS RN: 89-01-0	P1048 5g 25g  Pyrazole-3,5-dicarboxylic Acid Monohydrate CAS RN: 303180-11-2	B3533 1g 5g  2,2'-Bipyridine-6,6'-dicarboxylic Acid CAS RN: 4479-74-7	B3502 1g 5g  2,2'-Bipyridine-5,5'-dicarboxylic Acid CAS RN: 1802-30-8	B1876 100mg 1g  2,2'-Biisonicotinic Acid CAS RN: 6813-38-3
B3622 1g  2,2'-Bipyridine-3,3'-dicarboxylic Acid CAS RN: 4433-01-6	D4273 200mg  2,2'-Diamino-4,4'-bithiazole CAS RN: 58139-59-6	B6458 250mg  1,4-Di(1H-imidazol-1-yl)-butane CAS RN: 69506-86-1	B4023 1g 5g  1,4-Bis[(1H-imidazol-1-yl)-methyl]benzene CAS RN: 56643-83-5	D5777 1g 5g  4,4'-Di(1H-imidazol-1-yl)-1,1'-biphenyl CAS RN: 855766-92-6
T3903 1g  1,3,5-Tri(1H-imidazol-1-yl)-benzene CAS RN: 528543-96-6	T3479 1g 5g  1,3,5-Tris[(1H-imidazol-1-yl)methyl]benzene CAS RN: 147951-02-8			
Other Organic Linkers		T2760 1g 5g  1,3-Triethynylbenzene CAS RN: 7567-63-7	T3151 100mg 1g  Tetrakis(4-ethynylphenyl)-methane CAS RN: 177991-01-4	

Other Organic Linkers

По вопросам продаж и поддержки обращайтесь:

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Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
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Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
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Новосибирск (383)227-86-73

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Орел (4862)44-53-42
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Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Саранск (8342)22-96-24
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Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35

Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
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