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1928年8月29日生于江苏省苏州市。研究员，博士生导师。

1991年当选为中国科学院化学部学部委员（院士）。

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## 教育

- 1951年浙江大学化学系毕业。

## 工作经历

- 1951年到中国科学院有机化学研究所工作至今。
- 历任研究实习员、助理研究员、副研究员、研究员。
- 1984年被批准为博士导师。现任本所研究员。

## 社会兼职

- 1996 - 1997: <<中国化学>>主编。
- 1997 - 现在: <<Tetrahedron>>和<<Tetrahedron Letters>>顾问编委。

## 兼职教授

北京大学、浙江大学、苏州大学兼职教授。

## 获奖

- 1997年上海市劳动模范。

- 1999年何梁何利基金科学与技术奖。
- 1999年国家自然科学奖二等奖（项目主持人）。
- 2001年全国五一劳动奖章。

## 研究领域

- 五十年代从事链霉素的研究,在国内首先分离纯化制得盐酸链霉素氯化钙复盐结晶。
- 六十年代初参加了牛胰岛素A链全合成的早期工作。
- 六十年代从事萃取剂P-204工业合成方法研究、并获得成功获奖;参与研制成功了光学仪器防霉剂SF-501并获得成功获奖。
- 七十年代末研究金属有机化学,从金属有机化合物的基元反应发展新的有机合成反应。20年来发现了一些有学术意义和应用前景的反应,九十年代以来研究以炔烃衍生物为原料的合成反应。两次获得中国科学院自然科学奖一等奖。现从事二价钯催化的反应及有关基元反应的研究。
- 九十年代初开展了有机催化剂(主要是叔膦)的研究工作。

## 研究生培养

培养博士24名(其中1人获全国百篇优秀博士学位论文奖、3人获中国科学院院长奖学金特等奖、6人获中国科学院院长奖学金优秀奖),硕士23名。目前有在读研究生6名,其中博士生5名。

## 论文发表

共发表论文190余篇。

## 2000年以来发表的论文目录

1. An Efficient Preparation of  $\alpha$ -Alkylidene- $\beta$ -formylmethyl- $\gamma$ -lactams via Pd(II)-Catalyzed Intramolecular Alkyne- $\alpha,\beta$ -Unsaturated Carbonyl Coupling  
Xie, X.; Lu, X.\*  
*Synlett* **2000**, 707-709.
2. Role of Halide Ions in Palladium(II) Catalyzed Nucleophile Alkyne-a,b-Unsaturated Carbonyl Coupling Reactions  
Lu, X.; Wang, Z.  
*Polyhedron* **2000**, 19, 577-579.
3. Effect of Halide Ligands on the reactivity of Carbon-Palladium Bonds: Implications for Designing Catalytic Reactions

Wang, Z.; Zhang, Z.; Lu, X.\*

*Organometallics* **2000**, *19*, 775-780.

4. A Facile Highly Regio- and Stereo-selective Preparation of *N*-Tosyl Allylic Amines from Allylic Alcohols and Tosyl Isocyanate via Palladium(II)-Catalyzed Aminopalladation- $\beta$ -Heteroatom Elimination

Lei, A.; Lu, X.\*

*Org. Lett.* **2000**, *2*, 2357-2360.

5. Palladium(II)-Catalyzed Tandem Intramolecular Aminopalladation of Alkynes and Conjugate Addition. Synthesis of Oxazolidinones, Imidazolidinones and Lactams

Lei, A.; Lu, X.\*

*Org. Lett.* **2000**, *2*, 2699-2702.

6. Highly Enantioselective Palladium(II)-Catalyzed Cyclization of (*Z*)-4'-Acetoxy-2'-butenyl 2-Alkynoates. An Efficient Synthesis of Optically Active  $\gamma$ -Butyrolactones

Zhang, Q.; Lu, X.\*

*J. Am. Chem. Soc.* **2000**, *122*, 7604-7605.

7. Reactions of Electron-Deficient Alkynes Under Phosphine Catalysis

Lu, X.\*; Zhang, C.; Xu, Z.

*Acc. Chem. Res.* **2001**, *34*, 535-544.

8. Effect of Ligands on the Divalent Palladium-Catalyzed Carbon-Carbon Coupling Reactions: Highly Enantioselective Synthesis of Optically Active  $\gamma$ -Butyrolactones

Lu, X.\*; Zhang, Q.

*Pure Appl. Chem.* **2001**, *73*, 247-250.

9. Evidence of the Presence of the Palladium Enolates in Palladium(II)-Catalyzed Nucleophile-Alkyne- $\alpha,\beta$ -Unsaturated Carbonyl Tandem Additions: Reaction of the Intermediate with Acetyl Chloride

Zhang, Q.; Lu, X.

*Huaxue Xuebao* **2001**, *59*, 1702-1706.

10. 从贫电子炔烃出发的合成方法学研究

陆熙炎

*有机化学* **2001**, *21*, 769-783.



11. Palladium(II)-Catalyzed Synthesis of  $\alpha$ -Alkylidene- $\gamma$ -butyrolactams from *N*-Allylic-2-Alkynamides. Total Synthesis of ( $\pm$ )-Isocynodine and ( $\pm$ )-Isocynometrine  
  
Xie, X.; Lu, X.\*; Liu, Y.; Xu, W.  
  
*J. Org. Chem.* **2001**, *66*, 6545-6550.
  
12. Role of Halide Ions in Divalent Palladium Mediated Reactions: Competition between  $\beta$ -Heteroatom Elimination and  $\beta$ -Hydride Elimination of a Carbon-Palladium Bond  
  
Zhang, Z.; Lu, X.\*; Xu, Z.; Zhang, Q.; Han, X.  
  
*Organometallics*, **2001**, *20*, 3724–3728.
  
13. Palladium(II)-Catalyzed Asymmetric Cyclization of (*Z*)-4'-Acetoxy-2'-butenyl 2-Alkynoates. Role of Nitrogen-Containing Ligands in Palladium(II)-Mediated Reactions.  
  
Zhang, Q.; Lu, X.\*; Han, X.  
  
*J. Org. Chem.* **2001**, *66*, 7676-7684.
  
14. Palladium(II)-Catalyzed Tandem Reaction of Intramolecular Aminopalladation of Allenyl *N*-Tosylcarbamates and Conjugate Addition  
  
Liu, G.; Lu, X.\*  
  
*Org. Lett.* **2001**, *3*, 3879-3882.
  
15. Palladium(II)-Catalyzed Cyclization of *N*-(2',4'-Dienyl)alkynamides to  $\alpha$ -Alkylidene- $\gamma$ -butyrolactams  
  
Xie, X.; Lu, X.\*; Liu, G.  
  
*Chin. J. Chem.* **2001**, *19*, 1285-1288.
  
16. Palladium(II)-Catalyzed Highly Regio- and Diastereoselective Cyclization of Difunctional Allylic *N*-Tosylcarbamates. A Convenient Synthesis of Optically Active 4-Vinyl-2-oxazolidinones and Total Synthesis of 1,4-Dideoxy-1,4-imino-L-xylitol  
  
Lei, A.; Liu, G.; Lu, X.\*  
  
*J. Org. Chem.* **2002**, *67*, 974-980.
  
17. An Unexpected Reaction of Allylic Propynoate under Palladium(II) Catalysis [\[1\]](#)  
  
Zhang, Z.; Lu, X.\*; Lang, S.  
  
*Chin. J. Chem.* **2002**, *20*, 1287-1290..


18. Palladium(II)-Catalyzed Coupling Reactions of Alkynes and Allylic Compounds Initiated by Intramolecular Carbopalladation of Alkynes
- Liu, G.; Lu, X.\*
- Tetrahedron Lett.* **2002**, *43*, 6791-6794.
19. Palladium(II)-Catalyzed Three-Component Coupling Reaction Initiated by Acetoxypalladation of Alkynes: An Efficient Route to  $\gamma,\delta$ -Unsaturated Carbonyls
- Zhao, L.; Lu, X.\*
- Org. Lett.* **2002**, *4*, 3903-3906.
20. Pd<sup>II</sup>-Catalyzed Intramolecular Cyclization of Alkynes with Aldehydes, Ketones or Nitriles Initiated by Acetoxypalladation of Alkynes
- Zhao, L.; Lu, X.\*
- Angew. Chem.* **2002**, *41*, 4343-4345.
21. Highly Regioselective Construction of Spirocycles via Phosphine-Catalyzed [3+2] Cycloaddition
- Du, Y.; Lu, X.\*; Yu, Y.
- J. Org. Chem.* **2002**, *67*, 8901-8906.
22. Tandem Reactions to Construct Heterocycles via Phosphine-Catalyzed Umpolung Addition and Intramolecular Conjugate Addition
- Lu, C.; Lu, X.\*
- Org. Lett.* **2002**, *4*, 4677-4679.
23. Palladium-Catalyzed Reaction via Halopalladation of  $\pi$ -Compounds
- Lu, X.
- Handbook of Organopalladium Chemistry for Organic Synthesis*, Negishi, E.; de Meijere, A. (Eds.), John Wiley & Sons, New York, 2002, Vol. 2, pp. 2267-2287.
24. Palladium(II)-Catalyzed Allenic Acids- $\alpha,\beta$ -Unsaturated Carbonyl Coupling through Tandem Reactions of Intramolecular Oxypalladation and Conjugate Addition
- Liu, G.; Lu, X.\*
- Tetrahedron Lett.* **2003**, *44*, 127-130.
25. One-Pot Synthesis of Tetrahydrofuran Derivatives via a Divalent Palladium-Catalyzed Three-Component Coupling
- Liu, G.; Lu, X.\*

26. The First Example of a Catalytic Carbon-Phosphorus Ylide Reaction. A Novel Phosphine-Catalyzed [3+2] Cycloaddition of 2-Bromo- or 2-Acetoxyethyl-2-alkenoates with Electron-Deficient Olefins
- Du, Y.; Lu, X.;\* Zhang, C.
- Angew. Chem. Int. Ed.* **2003**, *42*, 1035-1037.
27. A Phosphine-Catalyzed [3+2] Cycloaddition Strategy Leading to the First Total Synthesis of (-)-Hinesol
- Du, Y.; Lu, X.\*
- J. Org. Chem.* **2003**, *68*, 6463-6465.
28. A Novel Highly Regio- and Diastereo-selective Haloamination of Alkenes Catalyzed by Divalent Palladium
- Lei, A.; Lu, X.\*; Liu, G.
- Tetrahedron Lett.* **2004**, *45*, 1785-1788.
29. Alkaloids-Catalyzed Regio- and Enantioselective Allylic Nucleophilic Substitution of *tert*-Butyl Carbonate of the Morita-Baylis-Hillman Products
- Du, Y.; Han, X.; Lu, X.\*
- Tetrahedron Lett.* **2004**, *45*, 4967-4971.
30. Unexpected Results in the Reaction of Active Methylene Compounds with Phenylsulfonyl-1,2-propadiene Triggered by Triphenylphosphine
- Lu, C.; Lu, X.\*
- Tetrahedron* **2004**, *60*, 6575-6579.
31. Palladium(II)-Catalyzed Cyclization of Alkynes with Aldehydes, Ketones or Nitriles Initiated by Acetoxypalladation of Alkynes
- Zhao, L.; Lu, X.\*
- Catalysts for Fine Chemical Synthesis, Vol. 3, Metal Catalysed Carbon-Carbon Bond-Forming Reactions*, Roberts, S. M.; Xiao, J.; Whittall, J.; Pickett, T. (Eds.), John Wiley & Sons, New York, **2004**, pp. 185-190.
32. Cycloisomerization of 1,6-Enynes Using Acetate as a Nucleophile under Palladium(II) Catalysis
- Zhang, Q.; Xu, W.; Lu, X.\*
- J. Org. Chem.* **2005**, *70*, 1505-1507.

33. Palladium(II)-Catalyzed Enyne Coupling Reaction Initiated by Acetoxypalladation of Alkynes and Quenched by Protonolysis of the Carbon-Palladium Bond  
Zhao, L.; Lu, X.\*; Xu, W.  
*J. Org. Chem.* **2005**, *70*, 4059-4063.
34. A Phosphine-Catalyzed [3+6] Annulation Reaction of Modified Allylic Compounds and Tropone  
Du, Y.; Feng, J.; Lu, X\*.  
*Org. Lett.* **2005**, *7*, 1987-1989.
35. Control of the  $\beta$ -Hydride Elimination Making Palladium-Catalyzed Coupling Reactions More Diversified  
Lu, X.  
*Topics in Catalysis* **2005**, *35*, 73-86.
36. 钯催化反应中的 $\beta$ -氢消除反应  
韩秀玲、刘桂霞、陆熙炎\*  
*有机化学* **2005**, *25*, 1182-1197.
37. Pd(II)-Bipyridine Catalyzed Conjugate Addition of Arylboronic Acid to  $\alpha,\beta$ -Unsaturated Carbonyl Compounds  
Lu, X.\*; Lin, S.  
*J. Org. Chem.* **2005**, *70*, 9651-9653.
38. Synthetic Methodology Using Tertiary Phosphines as Nucleophilic Catalysts  
Lu, X.\*; Du, Y.; Lu, C.  
*Pure Appl. Chem.* **2005**, *77*, 1985-1990.
39. Phosphine-Catalyzed One-Pot Synthesis of Cyclopentenones from Electron-Deficient Allene, Malononitrile and Aromatic Aldehydes  
Lu, X.\*; Lu, Z.; Zhang, X.  
*Tetrahedron* **2006**, *62*, 457-460.
40. Highly Efficient Construction of Benzene Ring in Carbazoles by Palladium-Catalyzed *Endo*-Mode Oxidative Cyclization of 3-(3'-Alkenyl)indoles  
Kong, A.; Han, X.; Lu, X.\*

41. Palladium(II)-Catalyzed Asymmetric Synthesis of (*Z*)- $\alpha$ -Alkylidene- $\gamma$ -Butyrolactams from (*Z*)-*N*-Allylic 2-Alkynamides. Total Synthesis of (-)-Isocynometrine
- Xu, W.; Kong, A.; Lu, X.\*
- J. Org. Chem.* **2006**, 71, 3854-3858.
42. Highly enantioselective hydrogenation of exocyclic double bond of *N*-tosyloxazolidinones catalyzed by a neutral rhodium complex and its synthetic applications
- Shen, Z.; Lu, X.\*; Lei, A.
- Tetrahedron* **2006**, 62, 9237-9246.
43. Palladium(II)-catalyzed addition of arylboronic acid to nitriles
- Zhao, B.; Lu, X.\*
- Tetrahedron Lett.* **2006**, 47, 6765-6768.
44. Palladium-bipyridine catalyzed conjugate addition of arylboronic acids to  $\alpha,\beta$ -unsaturated carbonyl compounds in aqueous media
- Lin, S.; Lu, X.\*
- Tetrahedron Lett.* **2006**, 47, 7167-7170.
45. Palladium(II)-Catalyzed Tandem Intramolecular Aminopalladation of 2-Alkynylanilines and Conjugate Addition for Synthesis of 2,3-Disubstituted Indoles Derivatives
- Shen, Z.; Lu, X.\*
- Tetrahedron* **2006**, 62, 108956-10899.
46. Cationic Palladium(II)-Catalyzed Addition of Arylboronic Acids to Nitriles. One Step Synthesis of Benzofurans from Phenoxyacetonitriles
- Zhao, B.; Lu, X.\*
- Org. Lett.* **2006**, 8, in the press.
47. Cationic Palladium Complex Catalyzed Highly Enantioselective Intramolecular Addition of Arylboronic Acids to Ketones. A Convenient Synthesis of Optically Active Cycloalkanols
- Liu, G.; Lu, X.\*
- J. Am. Chem. Soc.* **2007**, 129, in the press.





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