

## 利用非损伤微测技术已发表的种质相关文献列表 (截至 2024 年 8 月)

### 盐胁迫

标题	期刊名	影响因子	通讯作者	单位 (通讯作者)
Architecture and autoinhibitory mechanism of the plasma membrane Na <sup>+</sup> /H <sup>+</sup> antiporter SOS1 in Arabidopsis	<b>Nature Communications</b>	17.694	赵岩、江行玉	中国科学院生物物理研究所、广东海洋大学
Melatonin enhances KCl salinity tolerance by maintaining K <sup>+</sup> homeostasis in Malus hupehensis	<b>PLANT BIOTECHNOLOGY JOURNAL</b>	13.263	郑晓东	青岛农业大学
Genome-wide association studies identify OsWRKY53 as a key regulator of salt tolerance in rice	<b>Nature Communications</b>	16.6	万建民、王春明	中国农业科学院作物科学研究所、南京农业大学
A cluster of mutagenesis revealed an osmotic regulatory role of the OsPIP1 genes in enhancing rice salt tolerance	<b>The Crop Journal</b>	6.6	张倩茹、程宪国	国农业科学院农业资源与农业区划研究所
S-nitrosylation of ACO homolog 4 improves ethylene synthesis and salt tolerance in tomato	<b>New Phytologist</b>	10.323	巩彪	山东农业大学
CycC1;1-WRKY75 complex-mediated transcriptional regulation of SOS1 controls salt stress tolerance in Arabidopsis	<b>PLANT CELL</b>	12.085	刘文成	河南大学
Multifaceted regulatory functions of CsBPC2 in cucumber under salt stress conditions	<b>Horticulture Research</b>	7.291	李衍素	中国农业科学院蔬菜与花卉研究所
MicroRNA408 negatively regulates salt tolerance by affecting secondary cell wall development in maize	<b>Plant Physiology</b>	8.005	李文学	中国农业科学院作物科学研究所
Phosphatidic acid-regulated SOS2 controls sodium and potassium homeostasis in Arabidopsis under salt stress	<b>EMBO JOURNAL</b>	14.012	郭岩、章文华	中国农业大学、南京农业大学
The C2H2-type zinc finger transcription factor OSIC1 positively regulates stomatal closure under osmotic stress in poplar	<b>PLANT BIOTECHNOLOGY JOURNAL</b>	13.263	万东石、姜渊忠	兰州大学、四川大学
SALT OVERLY SENSITIVE 1 is inhibited by clade D Protein phosphatase 2C D6 and D7 in Arabidopsis thaliana	<b>PLANT CELL</b>	12.085	郭岩	中国农业大学
Growth-regulating factor 15-mediated gene regulatory network enhances salt tolerance in poplar	<b>Plant Physiology</b>	8.005	张德强	北京林业大学
The mechanistic basis of sodium exclusion in Puccinellia tenuiflora under conditions of salinity and potassium deprivation	<b>PLANT JOURNAL</b>	7.091	张金林、Sergey Shabala	兰州大学、The University of Western Australia

标题	期刊名	影响因子	通讯作者	单位 (通讯作者)
The classical SOS pathway confers natural variation of salt tolerance in maize	<b>NEW PHYTOLOGIST</b>	10.323	<b>蒋才富</b>	中国农业大学
OsTUB1 confers salt insensitivity by interacting with Kinesin13A to stabilize microtubules and ion transporters in rice	<b>NEW PHYTOLOGIST</b>	10.323	<b>万建民、王春明</b>	中国农业科学院作物科学研究所、南京农业大学
Mycorrhizal symbiosis reprograms ion fluxes and fatty acid metabolism in wild jujube during salt stress	<b>PLANT PHYSIOLOGY</b>	8.005	<b>黄建</b>	西北农林科技大学
Bracelet salt glands of the recretohalophyte <i>Limonium bicolor</i> : distribution, morphology, and induction	<b>Journal of Integrative Plant Biology</b>	9.106	<b>王宝山、袁芳</b>	山东师范大学
The genome of the recretohalophyte <i>Limonium bicolor</i> provides insights into salt gland development and salinity adaptation during terrestrial evolution	<b>Molecular Plant</b>	13.164	<b>王宝山、陈敏</b>	山东师范大学
The NADPH oxidase OsRbohA increases salt tolerance by modulating K <sup>+</sup> homeostasis in rice	<b>Crop Journal</b>	4.407	<b>蒋明义</b>	南京农业大学
Calcium-Mobilizing Properties of <i>Salvia miltiorrhiza</i> -Derived Carbon Dots Confer Enhanced Environmental Adaptability in Plants	<b>ACS Nano</b>	15.88	<b>孙健、雷炳富、王瑞刚</b>	江苏师范大学、华南农业大学、农业农村部环境保护科研监测所
Dynamic changes of phosphatidylinositol and phosphatidylinositol 4-phosphate levels modulate H <sup>+</sup> -ATPase and Na <sup>+</sup> /H <sup>+</sup> antiporter activities to maintain ion homeostasis in <i>Arabidopsis</i> under salt stress	<b>Molecular Plant</b>	13.164	<b>雷晓光、郭岩</b>	北京大学、中国农业大学
Calcineurin B-like protein 5 (SiCBL5) in <i>Setaria italica</i> enhances salt tolerance by regulating Na <sup>+</sup> homeostasis	<b>Crop Journal</b>	4.407	<b>张阿英</b>	南京农业大学
Early ABA-stimulated maintenance of Cl <sup>-</sup> homeostasis by mepiquat chloride priming confers salt tolerance in cotton seeds	<b>Crop Journal</b>	3.395	<b>严根土、宋美珍</b>	中国农科院棉花研究所

## 水旱胁迫

标题	期刊名	影响因子	通讯作者	单位 (通讯作者)
Independent and combined influence of drought stress and nitrogen deficiency on physiological and proteomic changes of barley leaves	<b>Environmental and Experimental Botany</b>	6.028	王耀升	中国农业科学院
Drought priming mechanisms in wheat elucidated by in-situ determination of dynamic stomatal behavior	<b>Frontiers in Plant Science</b>	6.627	王笑	南京农业大学
N6-methyladenosine RNA modification regulates cotton drought response in a Ca <sup>2+</sup> and ABA-dependent manner	<b>Plant Biotechnology Journal</b>	13.263	杨细燕、聂新辉	华中农业大学、石河子大学
H <sub>2</sub> S-mediated balance regulation of stomatal and non-stomatal factors responding to drought stress in Chinese cabbage	<b>Horticulture Research</b>	7.291	金竹萍	山西大学
GmTDN1 improves wheat yields by inducing dual tolerance to both drought and low-N stress	<b>Plant Biotechnology Journal</b>	9.803	马有志、陈明	中国农科院作物科学研究所
Phosphorylation of the plasma membrane H <sup>+</sup> -ATPase AHA2 by BAK1 is required for ABA-induced stomatal closure in Arabidopsis	<b>Plant Cell</b>	11.277	巩志忠	中国农业大学 / 河北大学
Persulfidation-induced structural change in SnRK2.6 establishes intramolecular interaction between phosphorylation and persulfidation	<b>Molecular Plant</b>	13.164	李积胜	西北农林科技大学
The root-specific NF-Y family transcription factor, PdNF-YB21, positively regulates root growth and drought resistance by ABA-mediated IAA transport in Populus	<b>New Phytologist</b>	7.299	夏新莉	北京林业大学
HvAKT2 and HvHAK1 Confer Drought Tolerance in Barley through Enhanced Leaf Mesophyll H <sup>+</sup> Homeostasis	<b>Plant Biotechnology Journal</b>	6.84	邬飞波、陈仲华	浙江大学作物科学研究所
Evolution of chloroplast retrograde signaling facilitates green plant adaptation to land	<b>Proc Natl Acad Sci USA</b>	9.504	陈仲华	浙江大学
Alleviation of drought stress by mycorrhizas is related to increased root H <sub>2</sub> O <sub>2</sub> efflux in trifoliate orange	<b>Scientific Reports</b>	5.228	吴强盛	长江大学
First cloning and characterization of two functional aquaporin genes from an arbuscular mycorrhizal fungus <i>Glomus intraradices</i>	<b>New Phytologist</b>	6.645	陈保冬	中科院生态环境中心

重金属

标题	期刊名	影响因子	通讯作者	单位 (通讯作者)
Homolog of Human placenta-specific gene 8, PcPLAC8-10, enhances cadmium uptake by Populus roots	<b>Journal of Hazardous Materials</b>	14.224	罗志斌、石文广、邓澍荣	中国林业科学院
Inventory of cadmium-transporter genes in the root of mangrove plant Avicennia marina under cadmium stress	<b>Journal of Hazardous Materials</b>	14.224	郑海雷	厦门大学
Fertilizer-induced manganese oxide formation enhances cadmium removal by paddy crusts from irrigation water	<b>Journal of Hazardous Materials</b>	14.224	彭亮	湖南农业大学
Metallochaperone OsHIPP9 is involved in the retention of cadmium and copper in rice	<b>Plant Cell and Environment</b>	7.947	曲乐庆	中国科学院植物研究所
reduces grain-cadmium levels in rice (Oryza sativa)	<b>Plant Journal</b>	7.091	陈彩艳	中国科学院亚热带农业生态研究所
AetSRG1 contributes to the inhibition of wheat Cd accumulation by stabilizing phenylalanine ammonia lyase	<b>Journal of Hazardous Materials</b>	10.588	杜旭焯、Huayan Yin	贵州师范大学、青岛农业大学
Radial transport difference mediated by root endodermal barriers contributes to differential cadmium accumulation between japonica and indica subspecies of rice (Oryza sativa L.)	<b>Journal of Hazardous Materials</b>	10.588	王昌全、陶琦	四川农业大学
Ammonium has stronger Cd detoxification ability than nitrate by reducing Cd influx and increasing Cd fixation in Solanum nigrum L.	<b>Journal of Hazardous Materials</b>	10.588	郑海雷	厦门大学
Harnessing an arbuscular mycorrhizal fungus to improve the adaptability of a facultative metallophytic poplar (Populus yunnanensis) to cadmium stress: Physiological and molecular responses	<b>Journal of Hazardous Materials</b>	10.588	李涛、赵之伟	云南大学
Wheat TaPUB1 Regulates Cd Uptake and Tolerance by Promoting the Degradation of TaIRT1 and TaIAA17	<b>Journal of Agriculture and Food Chemistry</b>	5.279	张广强、Wei Wang	山东农业大学

## 氮高效

标题	期刊名	影响因子	通讯作者	单位 (通讯作者)
Hyphosphere microorganisms facilitate hyphal spreading and root colonization of plant symbiotic fungus in ammonium-enriched soil	<b>ISME Journal</b>	11.217	<b>戴传超、张伟</b>	南京师范大学
Strigolactone and gibberellin signaling coordinately regulate metabolic adaptations to changes in nitrogen availability in rice	<b>Molecular Plant</b>	27.5	<b>张亚丽、傅向东</b>	南京农业大学、中国科学院遗传与发育生物学研究所
Potassium Alleviated High Nitrogen-Induced Apple Growth Inhibition by Regulating Photosynthetic Nitrogen Allocation and Enhancing Nitrogen Utilization Capacity	<b>Horticultural Plant Journal</b>	4.24	<b>朱占玲, 姜远茂, 葛顺峰</b>	山东农业大学
The anion channel SLAH3 interacts with potassium channels to regulate nitrogen-potassium homeostasis and the membrane potential in Arabidopsis	<b>PLANT CELL</b>	12.085	<b>何凯</b>	兰州大学
Kinase MxMPK4-1 and calmodulin binding protein MxIQM3 enhance apple root acidification during Fe deficiency	<b>PLANT PHYSIOLOGY</b>	8.005	<b>韩振海、王忆</b>	中国农业大学
Carbon-nitrogen trading in symbiotic nodules depends on magnesium import	<b>CURRENT BIOLOGY</b>	10.9	<b>陈志长</b>	福建农林大学
Multi-omics analysis reveals the mechanism of bHLH130 responding to low-nitrogen stress of apple rootstock	<b>Plant Physiology</b>	8.005	<b>王忆</b>	中国农业大学
MYB308-mediated transcriptional activation of plasma membrane H <sup>+</sup> -ATPase 6 promotes iron uptake in citrus	<b>Horticulture Research</b>	6.793	<b>潘志勇</b>	华中农业大学
Nitrate transporter NRT1.1 and anion channel SLAH3 form a functional unit to regulate nitrate-dependent alleviation of ammonium toxicity	<b>Journal of Integrative Plant Biology</b>	7.061	<b>何凯</b>	兰州大学
Brassinosteroids modulate nitrogen physiological response and promote nitrogen uptake in maize ( <i>Zea mays</i> L.)	<b>Crop Journal</b>	4.647	<b>张明才</b>	中国农业大学
STOP1 activates NRT1.1-mediated nitrate uptake to create a favorable rhizospheric pH for plant adaptation to acidity	<b>Plant Cell</b>	11.277	<b>金崇伟</b>	浙江大学

标题	期刊名	影响因子	通讯作者	单位 (通讯作者)
WRKY46 promotes ammonium tolerance in Arabidopsis by repressing NUDX9 and IAA-conjugating genes and by inhibiting NH <sub>4</sub> <sup>+</sup> efflux in the root elongation zone	<b>New Phytologist</b>	10.151	<b>李光杰</b>	中国科学院南京土壤研究所
Plasma membrane H <sup>+</sup> -ATPase overexpression increases rice yield via simultaneous enhancement of nutrient uptake and photosynthesis	<b>Nature Communications</b>	12.121	<b>朱毅勇、木下俊則 (Toshinori Kinoshita)</b>	南京农业大学、日本名古屋大学

## 温度

标题	期刊名	影响因子	通讯作者	单位 (通讯作者)
Transcriptome Analysis of the Responses of Rice Leaves to Chilling and Subsequent Recovery	<b>INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES</b>	6.208	<b>林文雄、Zhixing Zhang</b>	福建农林大学
Inositol Improves Cold Tolerance Through Inhibiting CBL1 and Increasing Ca <sup>2+</sup> Influx in Rapeseed ( <i>Brassica napus</i> L.)	<b>Frontiers in Plant Science</b>	6.627	<b>Xiling Zou</b>	中国农业科学院油料作物研究所
Mechanism of CsGPA1 in regulating cold tolerance of cucumber	<b>Horticulture Research</b>	6.793	<b>于贤昌、孙敏涛、高丽红</b>	中国农业科学院蔬菜花卉研究所、中国农业大学
TT2 controls rice thermotolerance through SCT1-dependent alteration of wax biosynthesis	<b>Nature Plants</b>	15.793	<b>林鸿宣</b>	中科院分子植物科学卓越创新中心
A β-Ketoacyl carrier protein reductase confers heat tolerance via the regulation of fatty acid biosynthesis and stress signaling in rice	<b>New Phytologist</b>	8.512	<b>于彦春、武丽敏、陈仲华</b>	杭州师范大学、西悉尼大学
High-Temperature-Responsive Poplar lncRNAs Modulate Target Gene Expression via RNA Interference and Act as RNA Scaffolds to Enhance Heat Tolerance	<b>International Journal of Molecular Sciences</b>	4.556	<b>张德强</b>	北京林业大学
Transcriptional Activation and Phosphorylation of OsCNGC9 Confer Enhanced Chilling Tolerance in Rice	<b>Molecular Plant</b>	12.084	<b>万建民</b>	中国农业科学院作物科学研究所
COLD1 Confers Chilling Tolerance in Rice	<b>Cell</b>	33.116	<b>种康</b>	中科院植物所

## 抗病

标题	期刊名	影响因子	通讯作者	单位 (通讯作者)
Linalool Activates Oxidative and Calcium Burst and CAM3-ACA8 Participates in Calcium Recovery in Arabidopsis Leaves	<b>INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES</b>	6.208	沈应柏	北京林业大学
A cyclic nucleotide-gated channel mediates cytoplasmic calcium elevation and disease resistance in rice	<b>cell research</b>	17.848	万建民	中国农业科学院作物科学研究所
The fungal pathogen Magnaporthe oryzae suppresses innate immunity by modulating a host potassium channel	<b>Plos Pathogens</b>	6.608	王国梁、王毅	中国农科院、中国农业大学
Nanomaterial Size and Surface Modification Mediate Disease Resistance Activation in Cucumber (Cucumis sativus)	<b>ACS Nano</b>	17.1	曹雪松	江南大学
A phospho-switch constrains BTL2-mediated phyto cytokine signaling in plant immunity	<b>Cell</b>	66.85	单立波、何平	得克萨斯农工大学
CML8 and GAD4 function in (Z)-3-hexenol-mediated defense by regulating $\gamma$ -aminobutyric acid accumulation in Arabidopsis	<b>PLANT PHYSIOLOGY AND BIOCHEMISTRY</b>	5.437	沈应柏	北京林业大学
TaBln1, a member of the Blufensin family, negatively regulates wheat resistance to stripe rust by reducing Ca <sup>2+</sup> influx	<b>PLANT PHYSIOLOGY</b>	8.34	张新梅	西北农林科技大学
Phosphorylation of the plasma membrane H <sup>+</sup> -ATPase AHA2 by BAK1 is required for ABA-induced stomatal closure in Arabidopsis	<b>Plant Cell</b>	11.277	巩志忠	中国农业大学 / 河北大学
The role of plasma membrane H <sup>+</sup> -ATPase in jasmonate-induced ion fluxes and stomatal closure in Arabidopsis thaliana	<b>Plant Journal</b>	5.972	沈应柏	北京林业大学

## 铝胁迫

标题	期刊名	影响因子	通讯作者	单位 (通讯作者)
Evolution of phosphate metabolism in Tibetan wild barley to adapt to aluminum stress	<b>Plant and Soil</b>	4.993	陈仲华、蔡圣冠	浙江大学、西悉尼大学
Aluminum toxicity-induced pollen tube growth inhibition in apple ( <i>Malus domestica</i> ) is mediated by interrupting calcium dynamics and modification of cell wall components	<b>Environmental and Experimental Botany</b>	3.712	秦岭、房克凤	北京农学院
Boron Alleviates Aluminum Toxicity by Promoting Root Alkalinization in Transition Zone via Polar Auxin Transport	<b>Plant physiology</b>	5.949	喻敏、Sergey Shabala	佛山科学技术学院、University of Tasmania
BoALMT1, an Al-Induced Malate Transporter in Cabbage, Enhances Aluminum Tolerance in <i>Arabidopsis thaliana</i>	<b>Frontiers in Plant Science</b>	3.678	郭仰东	中国农业大学
Ion Flux in Roots of Chinese Fir ( <i>Cunninghamia lanceolata</i> (Lamb.) Hook) under Aluminum Stress	<b>PLoS One</b>	3.057	林思祖	福建农林大学
Brassica oleracea MATE Encodes a Citrate Transporter, and Enhances Aluminum Tolerance in <i>Arabidopsis thaliana</i>	<b>Plant and Cell Physiology</b>	4.134	郭仰东	中国农业大学

## 种子活性

标题	期刊名	影响因子	通讯作者	单位 (通讯作者)
Molecular hydrogen positively regulates nitrate uptake and seed size by targeting nitrate reductase	<b>Plant Physiology</b>	8.005	沈文飙	南京农业大学
H <sub>2</sub> O <sub>2</sub> and Ca <sup>2+</sup> Signaling Crosstalk Counteracts ABA to Induce Seed Germination	<b>Antioxidants</b>	7.675	李好	西北农林科技大学
Exogenous Spermidine Priming Mitigates the Osmotic Damage in Germinating Seeds of <i>Leymus chinensis</i> Under Salt-Alkali Stress	<b>Frontiers in Plant Science</b>	5.753	程宪国	中国农业科学院农业资源与农业区划研究所
Exogenous salicylic acid signal reveals an osmotic regulatory role in priming the seed germination of <i>Leymus chinensis</i> under salt-alkali stress	<b>Environmental and Experimental Botany</b>	4.027	程宪国	中国农业科学院农业资源与农业区划研究所
SPL14/17 act downstream of strigolactone signalling to modulate rice root elongation in response to nitrate supply	<b>Plant Journal</b>	6.141	孙虎威、赵全志、张亚丽	河南农业大学、南京农业大学



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Melatonin antagonizes ABA action to promote seed germination by regulating Ca <sup>2+</sup> efflux and H <sub>2</sub> O <sub>2</sub> accumulation	<b>Plant Science</b>	3.591	<b>张显</b>	西北农林科技大学
High temperature and drought stress cause abscisic acid and reactive oxygen species accumulation and suppress seed germination growth in rice.	<b>protoplasma</b>	2.633	<b>赵全志</b>	河南农业大学
The fluxes of H <sub>2</sub> O <sub>2</sub> and O <sub>2</sub> can be used to evaluate seed germination and vigor of <i>Caragana korshinskii</i>	<b>Planta</b>	3.347	<b>汪晓峰</b>	北京林业大学
A real-time, non-invasive, micro-optrode technique for detecting seed viability by using oxygen influx	<b>Scientific Reports</b>	2.927	<b>卢新雄</b>	中国农业科学院