

NMT 代表性文献 (部分)

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 ⁺ /H ⁺ antiporter SOS1 in Arabidopsis | Nature Communications | 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 ⁺ homeostasis in Malus hupehensis | PLANT BIOTECHNOLOGY JOURNAL | 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 | Nature Communications | 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 | The Crop Journal | 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 | New Phytologist | 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 | PLANT CELL | 12.085 | 刘文成 | 河南大学 |
| Multifaceted regulatory functions of CsBPC2 in cucumber under salt stress conditions | Horticulture Research | 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 | Plant Physiology | 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 | EMBO JOURNAL | 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 | PLANT BIOTECHNOLOGY JOURNAL | 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 | PLANT CELL | 12.085 | 郭岩 | 中国农业大学 |
| Growth-regulating factor 15-mediated gene regulatory network enhances salt tolerance in poplar | Plant Physiology | 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 | PLANT JOURNAL | 7.091 | 张金林、Sergey Shabala | 兰州大学、The University of Western Australia |

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|---|---|--------|-------------------|------------------------------|
| The classical SOS pathway confers natural variation of salt tolerance in maize | NEW PHYTOLOGIST | 10.323 | 蒋才富 | 中国农业大学 |
| OsTUB1 confers salt insensitivity by interacting with Kinesin13A to stabilize microtubules and ion transporters in rice | NEW PHYTOLOGIST | 10.323 | 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 |
| Mycorrhizal symbiosis reprograms ion fluxes and fatty acid metabolism in wild jujube during salt stress | PLANT PHYSIOLOGY | 8.005 | 黄建 | 西北农林科技大学 |
| Bracelet salt glands of the recretohalophyte <i>Limonium bicolor</i> : distribution, morphology, and induction | Journal of Integrative Plant Biology | 9.106 | 王宝山、袁芳 | 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 | Molecular Plant | 13.164 | 王宝山、陈敏 | 山东师范大学 |
| The NADPH oxidase OsRbohA increases salt tolerance by modulating K ⁺ homeostasis in rice | Crop Journal | 4.407 | 蒋明义 | 南京农业大学 |
| Calcium-Mobilizing Properties of <i>Salvia miltiorrhiza</i> -Derived Carbon Dots Confer Enhanced Environmental Adaptability in Plants | ACS Nano | 15.88 | 孙健、雷炳富、王瑞刚 | 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 ⁺ -ATPase and Na ⁺ /H ⁺ antiporter activities to maintain ion homeostasis in <i>Arabidopsis</i> under salt stress | Molecular Plant | 13.164 | 雷晓光、郭岩 | 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 ⁺ homeostasis | Crop Journal | 4.407 | 张阿英 | 南京农业大学 |
| Early ABA-stimulated maintenance of Cl ⁻ homeostasis by mepiquat chloride priming confers salt tolerance in cotton seeds | Crop Journal | 3.395 | 严根土、宋美珍 | 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 | Environmental and Experimental Botany | 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 | Frontiers in Plant Science | 6.627 | 王笑 | 南京农业大学 |
| N6-methyladenosine RNA modification regulates cotton drought response in a Ca ²⁺ and ABA-dependent manner | Plant Biotechnology Journal | 13.263 | 杨细燕、聂新辉 | 华中农业大学、石河子大学 |
| H2S-mediated balance regulation of stomatal and non-stomatal factors responding to drought stress in Chinese cabbage | Horticulture Research | 7.291 | 金竹萍 | 山西大学 |
| GmTDN1 improves wheat yields by inducing dual tolerance to both drought and low-N stress | Plant Biotechnology Journal | 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 ⁺ -ATPase AHA2 by BAK1 is required for ABA-induced stomatal closure in Arabidopsis | Plant Cell | 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 | Molecular Plant | 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 | New Phytologist | 7.299 | 夏新莉 | 北京林业大学 |
| HvAKT2 and HvHAK1 Confer Drought Tolerance in Barley through Enhanced Leaf Mesophyll H ⁺ Homeostasis | Plant Biotechnology Journal | 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 | Proc Natl Acad Sci USA | 9.504 | 陈仲华 | 浙江大学 |
| Alleviation of drought stress by mycorrhizas is related to increased root H ₂ O ₂ efflux in trifoliate orange | Scientific Reports | 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> | New Phytologist | 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 | Journal of Hazardous Materials | 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 | Journal of Hazardous Materials | 14.224 | 郑海雷 | 厦门大学 |
| Fertilizer-induced manganese oxide formation enhances cadmium removal by paddy crusts from irrigation water | Journal of Hazardous Materials | 14.224 | 彭亮 | 湖南农业大学 |
| Metallochaperone OsHIPP9 is involved in the retention of cadmium and copper in rice | Plant Cell and Environment | 7.947 | 曲乐庆 | 中国科学院植物研究所 |
| reduces grain-cadmium levels in rice (Oryza sativa) | Plant Journal | 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 | Journal of Hazardous Materials | 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.) | Journal of Hazardous Materials | 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. | Journal of Hazardous Materials | 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 | Journal of Hazardous Materials | 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 | Journal of Agriculture and Food Chemistry | 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 | ISME Journal | 11.217 | 戴传超、张伟 | 南京师范大学 |
| Strigolactone and gibberellin signaling coordinately regulate metabolic adaptations to changes in nitrogen availability in rice | Molecular Plant | 27.5 | 张亚丽、傅向东 | 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 | Horticultural Plant Journal | 4.24 | 朱占玲, 姜远茂, 葛顺峰 | 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 | PLANT CELL | 12.085 | 何凯 | 兰州大学 |
| Kinase MxMPK4-1 and calmodulin binding protein MxIQM3 enhance apple root acidification during Fe deficiency | PLANT PHYSIOLOGY | 8.005 | 韩振海、王忆 | 中国农业大学 |
| Carbon-nitrogen trading in symbiotic nodules depends on magnesium import | CURRENT BIOLOGY | 10.9 | 陈志长 | 福建农林大学 |
| Multi-omics analysis reveals the mechanism of bHLH130 responding to low-nitrogen stress of apple rootstock | Plant Physiology | 8.005 | 王忆 | 中国农业大学 |
| MYB308-mediated transcriptional activation of plasma membrane H ⁺ -ATPase 6 promotes iron uptake in citrus | Horticulture Research | 6.793 | 潘志勇 | 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 | Journal of Integrative Plant Biology | 7.061 | 何凯 | 兰州大学 |
| Brassinosteroids modulate nitrogen physiological response and promote nitrogen uptake in maize (<i>Zea mays</i> L.) | Crop Journal | 4.647 | 张明才 | 中国农业大学 |
| STOP1 activates NRT1.1-mediated nitrate uptake to create a favorable rhizospheric pH for plant adaptation to acidity | Plant Cell | 11.277 | 金崇伟 | 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_4^+ efflux in the root elongation zone | New Phytologist | 10.151 | 李光杰 | 中国科学院南京土壤研究所 |
| Plasma membrane H^+ -ATPase overexpression increases rice yield via simultaneous enhancement of nutrient uptake and photosynthesis | Nature Communications | 12.121 | 朱毅勇、木下俊则 (Toshinori Kinoshita) | 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 | INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES | 6.208 | 林文雄、Zhixing Zhang | 福建农林大学 |
| Inositol Improves Cold Tolerance Through Inhibiting CBL1 and Increasing Ca^{2+} Influx in Rapeseed (<i>Brassica napus</i> L.) | Frontiers in Plant Science | 6.627 | Xiling Zou | 中国农业科学院油料作物研究所 |
| Mechanism of CsGPA1 in regulating cold tolerance of cucumber | Horticulture Research | 6.793 | 于贤昌、孙敏涛、高丽红 | 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 | Nature Plants | 15.793 | 林鸿宣 | 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 | New Phytologist | 8.512 | 于彦春、武丽敏、陈仲华 | 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 | International Journal of Molecular Sciences | 4.556 | 张德强 | 北京林业大学 |
| Transcriptional Activation and Phosphorylation of OsCNGC9 Confer Enhanced Chilling Tolerance in Rice | Molecular Plant | 12.084 | 万建民 | 中国农业科学院作物科学研究所 |
| COLD1 Confers Chilling Tolerance in Rice | Cell | 33.116 | 种康 | 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 | INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES | 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 | cell research | 17.848 | 万建民 | 中国农业科学院作物科学研究所 |
| The fungal pathogen <i>Magnaporthe oryzae</i> suppresses innate immunity by modulating a host potassium channel | Plos Pathogens | 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 (<i>Cucumis sativus</i>) | ACS Nano | 17.1 | 曹雪松 | 江南大学 |
| A phospho-switch constrains BTL2-mediated phyto cytokine signaling in plant immunity | Cell | 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 γ -aminobutyric acid accumulation in Arabidopsis | PLANT PHYSIOLOGY AND BIOCHEMISTRY | 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^{2+} influx | PLANT PHYSIOLOGY | 8.34 | 张新梅 | 西北农林科技大学 |
| Phosphorylation of the plasma membrane H^+ -ATPase AHA2 by BAK1 is required for ABA-induced stomatal closure in Arabidopsis | Plant Cell | 11.277 | 巩志忠 | 中国农业大学 / 河北大学 |
| The role of plasma membrane H^+ -ATPase in jasmonate-induced ion fluxes and stomatal closure in <i>Arabidopsis thaliana</i> | Plant Journal | 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 | Plant and Soil | 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 | Environmental and Experimental Botany | 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 | Plant physiology | 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> | Frontiers in Plant Science | 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 | PLoS One | 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> | Plant and Cell Physiology | 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 | Plant Physiology | 8.005 | 沈文飙 | 南京农业大学 |
| H ₂ O ₂ and Ca ²⁺ Signaling Crosstalk Counteracts ABA to Induce Seed Germination | Antioxidants | 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 | Frontiers in Plant Science | 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 | Environmental and Experimental Botany | 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 | Plant Journal | 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 ²⁺ efflux and H ₂ O ₂ accumulation | Plant Science | 3.591 | Xian Zhang | 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. | protoplasma | 2.633 | 赵全志 | 河南农业大学 |
| The fluxes of H ₂ O ₂ and O ₂ can be used to evaluate seed germination and vigor of <i>Caragana korshinskii</i> | Planta | 3.347 | 汪晓峰 | 北京林业大学 |
| A real-time, non-invasive, micro-optrode technique for detecting seed viability by using oxygen influx | Scientific Reports | 2.927 | 卢新雄 | 中国农业科学院 |