

Dialectics of Nature – 1975, Issue 4: Index Translated into English

Natural History

Li Bingwen and Hu Bo: Humanity's Continuation and Development (Continued) (p. 1)

Astrophysics and Cosmological Issues

*[[Editors note on the following two articles: Why do the spectral lines of extragalactic objects generally have the phenomenon of shifting? This is an important issue in current astrophysics. It involves the understanding of the basic properties of extragalactic objects and the basic view of the universe, and also involves the cosmological view and methodology in astrophysics research. These two articles have explored this issue to a certain extent, and put forward **different views** on the specific theory. This journal hopes that readers can actively submit articles and participate in discussions to promote the prosperity of astrophysics research.]]*

Li Ke: What Does the 'Redshift' Phenomenon Indicate? – Re-evaluation of the "Big Bang" cosmology (p. 34)

Fang Lizhi, Cheng Fuzhen, Zhang Jiamao, and Han Yongyao, University of Science and Technology of China: The Redshift of Extragalactic Objects Can be Recognized (p. 53)

Xi Zezong: The formation and development of Xuan Ye theory - The Theory of the Infinity of the Universe in Ancient China (p. 70) *[[Xuan Ye theory proposes an infinite universe]]*

Photosynthesis Problems

Fang Lizhi, University of Science and Technology of China: On the Role of Chloroplasts in Light Reaction – Analysis on the The Electron Theory of Catalysis and the "Theory of Two Photochemical Systems" (p. 86) *[[This article opposes the metaphysical "Theory of Two Photochemical Systems" that explains photosynthesis as the result of two isolated processes which are activated respectively by short wave and long wave light. This theory is increasingly contradicted by empirical evidence. By contrast, with the discovery that chloroplasts (Organelles involved in Photosynthesis) have a semi-conductor property, the article proposes The Electron Theory of Catalysis to apply to photosynthesis]]*

Zeng Jiangang: On the significance of photosynthesis research (p. 95)

Beijing Academy of Agricultural Sciences in Shanghai: Light Energy Utilization and High Crop Yield (p. 103)

Yin Honzhang: The Development of the Understanding of Photosynthesis (p. 108)

Investigative Reports

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Xin Chengwen: Mechanization Has Promoted the Prosperity of Both Agriculture and Sideline Industries – Investigation of Xuejiaping Production Team (p. 116)

Learning the Dialectics of Nature From Practice

Su Jungong, Shanghai Waterway Bureau Fleet: Huangpu River Silt Transformed Into Fertile Fields (p. 128) *[[Details the handling of river silt that disrupted shipping through using it as soil]]*

Fruit Warehouse, Vegetable and Fruit Commodity Company, Weifang, Shandong: The Preservation of Apples (p. 133)

Shanghai Industrial Equipment Installment Company: A New Song of Hoisting (p. 139) *[[“Hoisting” here means the installment of petrochemical equipment. The article details the resolution of a relatively simple problem in this process which had been declared unresolvable due to dogmatic interpretation of foreign experience]]*

Shanghai No. 1 Dye and Chemical Factory: A New Method for Active Turquoise Blue Dye Production (p. 145)

Historical Materials on the Dialectics of Nature

Editors: Selected Notes from Song Yinxing’s “On Gas” (p. 150)

Edwin Hubble [US]: A Relation Between Distance and Radial Velocity Among Extra-Galactic Nebulae (p. 155)

Selected Translations of Foreign Essays

J. Arp [US]: Observational Paradoxes in Extragalactic Astronomy (p. 163)

Yu Huai: A Vivid Street School – Wandering Through the Science and Technology Gallery (p. 182)

Shi Ge: Film Review – “Living Fossils” Deep in the Forest – After Watching the Colorful Educational Film “Panda” (p. 187) *[[The film discusses the evolution of pandas, including from carnivores → herbivores and the reduction of vision as an example of natural dialectics. They are “living fossils” as they have undergone relatively less evolution since the Neogene period]]*

Editors: Further Research and Discussion is Required on Genetic Issues (p. 194)

Small Dictionary *[[trans: or glossary]]* (p. 197)

Contents of the 1st to 10th Issue of this Journal (p. 199) *[[Table of contents from issue 1 1973 to issue 4 1975]]*